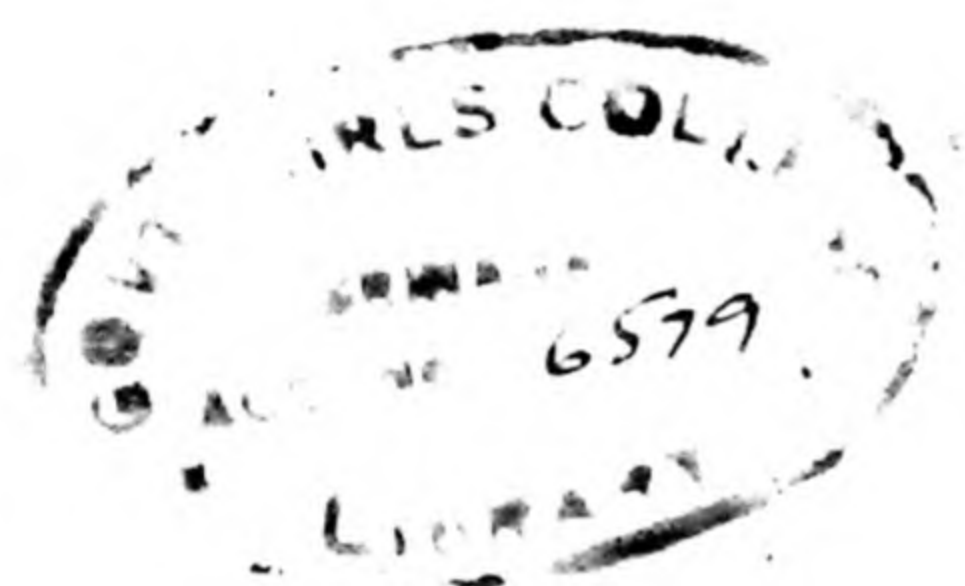


**INTRODUCTION  
TO  
ECONOMIC  
PRINCIPLES**

ECONOMICS









# INTRODUCTION TO ECONOMIC PRINCIPLES

*By*

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*without Prejudice", etc.*

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THIRD (1959) REVISED EDITION

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## PREFACE TO FIRST EDITION

This book contains an exposition of elementary principles and theories of Economics, and is meant primarily for Intermediate or equivalent classes of the various Indian Universities. The syllabuses and standards prescribed by Indian Universities for Intermediate classes show marked differences. If the courses of the Universities in Northern India are very comprehensive and thorough, those of Southern India seem to lay noticeable stress on certain topics of economic theory. It is a matter of not a little surprise that spite of so many occasions when the teachers of the various Universities meet and exchange ideas, either on an Inter-Universities basis or otherwise, such wide differences should exist. However, it would be wasteful to argue for or against the superiority of the courses prescribed by Northern Universities over those of the Universities in the south. There is an evident need of bringing about some sort of uniformity of evolving a common course including the best features of the existing models. It is with this end in view that I have prepared the mss. of the present volume. I need not say that I do so with a considerable amount of diffidence ; for this work is evidently beyond the capacity of a single individual. A limited edition is being issued at the moment, so that the opinions received by colleagues from the different parts of the country can be given due consideration and weight and incorporated in the next edition.

I claim no originality in the principles of economics enunciated in this book ; for my effort has for the most part been to expose the accepted principles in the clearest possible manner, and to make a logical and systematic presentation of the whole body of economic doctrines at an elementary level. In such a book room for originality lies only in the sphere of exposition. I have a hope that the expository side of this book will be found satisfactory by those for whom it is meant. Diagrams and figures have been copiously used where necessary.

The chief objective and advantage of Economic Theory is that it trains the mind to think logically and analytically. It does not ask those who submit to its discipline to burden their memory with given facts and data : there is not much to remember or learn by heart here. All that is necessary for its students is to try to *understand* the working of a particular phenomenon or force. This understanding implies a clear, logical and critical study of economic principles. This understanding has to be followed by discussion, critical examination, refinement and modifications. Most of it is postponed for advanced students ; but none of these things is possible unless the student has accomplished a careful understanding of the elementary principles of the subject. If Economics is not studied along right lines, it would be found to be very dull. But if it is studied along correct lines, it becomes a subject of enduring pleasure and joy. If this is clearly realised by the teachers and the taught, a great obstacle in the path of a proper study of this subject will have been removed. This fact has been carefully borne in mind while writing these pages.

From what has been said above, it would be clear that the contents of the book can have room for improvement; and I would welcome suggestions in this respect. Other suggestions would be equally welcomed and would be properly considered at the time of preparing the next edition.

### **PREFACE TO THE SECOND (1957) EDITION**

I am glad that the present book, which was originally written with a view to bring about a certain amount of uniformity in the contents and methods of teaching Economics in different parts of the country at an elementary level, has been well received by teachers and students of the subject. It has encouraged me to revise it, in its second edition, more or less thoroughly ; and many modern theories, principles and views have now been incorporated in it in appropriate places. This has not only brought these theories up-to-date without in any way altering the non-controversial character of the book, but it would also perhaps add to its utility to students of undergraduate stage who want to have a book which, while written on orthodox lines and based on a divisional approach to the subject, includes an exposition of modern theories as a first step to their study of what has come to be popularly called Modern Economics.

### **PREFACE TO THE THIRD (1958) EDITION**

The book has been well received by the reading public, which shows that it has satisfied a real want and has succeeded, in some measure, in fulfilling the fundamental objective with which it was written. The present edition of the book has been generally revised but substantially the old form has been retained as it has stood the test of two editions and has received appreciation from teachers and students alike. Suggestions for improvement are invited and shall be thankfully accepted.

*University of Allahabad* }  
*August 25, 1958*

*A. N. AGARWALA*



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# Introductory Survey

Book I

Chapters 1—7

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## CHAPTER 1

### THE MEANING OF ECONOMICS

Political Economy has to do with the relations of men living in society, so far as these relations tend to satisfy the wants of life and concern the efforts made to provide for all that is generally understood by material welfare.—*Charles Gide*.

Economics is a new subject to you; and, like every new thing, it probably has its own thrills. You must be quite anxious to know what it is all about and what will have to be studied under it. This can be easily explained and understood.

Let us put a direct question to you: Why have you joined the college? If you give a reply to this question sincerely, you will probably say that your object is to become a civil servant, a judge, a lawyer or some such thing. If you think over the question more searchingly and deeply, you will say that your object is to *earn money* which may enable you to live a happy and comfortable life. This reply strikes the nail on the right head. It is the *necessity to earn money for the satisfaction of your wants*, which compels you to study in the college and acquire education.<sup>1</sup>

If you look to other men besides yourself and try to find out the object of their hard work, you will arrive at the same conclusion. Just go to the market one evening and closely watch the activities of the buyers and sellers assembled there. On the extreme right you may find the shop of the bookseller from whom you usually purchase books and stationery. The next shop may be that of the general merchant who supplies you toilet materials, letter papers and envelopes. You will see other shopkeepers in the line selling various articles, till you reach the end of the row where you might hear 'one price' shopkeeper crying at the top of his voice. "Har ek mal do anna", occasionally interrupted by the wandering tea-seller recommending his tea in a sweet voice: "*Mithi chae pilo babooji*". Why all these people come to the market and exert themselves? There is only one answer: "*For the sake of money*". Besides the sellers, you will also see numerous buyers in the market, with money in their pockets, purchasing the articles wanted by them. Children may be found purchasing toys; students, books; clerks, pens and pencils; and ladies, *saris* and other articles. Purchasers come to the market *to spend money with a view to acquire the articles wanted by them*.

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<sup>1</sup> There are certainly some students who study for the sake of acquiring knowledge and not for the sake of earning money; but such cases are rare.



Everywhere human beings will be found to make efforts and *earn money* ; and then to *spend this money* to satisfy their wants.<sup>2</sup> It is the *necessity to earn money* which can satisfy wants, that prompts human beings to exert themselves in the various occupations. It is this necessity which calls forth human activities in the various walks of life, which makes a shopkeeper keep a shop, a cultivator cultivate a field, a weaver weave cloth, a cook prepare food, a domestic servant serve in a house, a teacher teach students and a lawyer argue cases. Once money is earned, *it is spent on the objects of one's desire*, and the wants are thus satisfied. All the human activities of the above nature, *i.e.*, the activities concerning the earning and spending of wealth, are studied under Economics. Briefly, Economics studies human activities related to wealth.

### § 1. DEFINITION OF ECONOMICS

If you ask an economist to explain to you the meaning of Economics, he will probably proceed as follows.

#### (1) Economics studies only those activities which are directly related to wealth

Men have wants. Some wants are elemental and very pressing like the want for food and water; others are less urgent, *e.g.*, the want for a car or a beautiful bungalow. All these wants, of different kinds as they are, have to be satisfied. Faced by this problem, men are driven to work in factories and fields, schools and offices, and elsewhere, so that they may earn money by which they may purchase the articles of their desire. This is the reason why labourers work in factories from morn till evening; cultivators cultivate fields; shopkeepers open shops; servants render services; clerks work in offices; authors write books; and doctors treat patients. *All human activities related to wealth (and meant to satisfy human wants directly or indirectly) constitute the subject-matter of Economics.*<sup>3</sup> That is the reason why they are called "economic activities". Economic activities are those activities which are directly related to wealth.)

Some human activities are not directly related to wealth and hence they fall outside the scope of Economics. They are called 'non-economic activities.' Those human activities which are not directly related to wealth are called non-economic activities. For example, Mahatma Gandhi served the country as a patriotic duty; students play cricket and tennis for pleasure; mothers look after their children out of affection. Such activities are non-economic as they are not undertaken for the sake of wealth. But these activities can be related to wealth indirectly. Mahatma Gandhi served the country out of patriotism but he was never in want of money; students play for reasons of health, but good health enables them to earn larger incomes later by increasing

2 Sadhus, insane persons, and other similar individuals may be exceptions to this general rule; but as Economics studies average human beings, they are beyond the scope of our subject. See pages 3-4, *postea*.

3 Economics is sometimes defined as 'a science which studies wealth-earning and wealth-spending activities of human beings.' But activities relating to the *exchange* and *distribution* of wealth also fall within Economics. Hence this definition is narrow and should be avoided by students.



## § 2. ECONOMICS IS A POSITIVE, NORMATIVE AND APPLIED SCIENCE

We are now in a position to answer the question : Is Economics a Positive Science, or Normative Science, or Applied Science?

### **Economics as a Positive Science**

Economics is a positive science. It surveys the entire field of study carefully and establishes the relationship between cause and effect in all its branches. It states such relationships as they exist in the fields of consumption, production, exchange and distribution of wealth. In the field of consumption, it tells us that *if* the quantity of a commodity possessed by a man increases, the utility of each of its successive units diminishes. In the field of production, it informs us that *if* additional labour and capital are applied to a plot of land, after a certain point, less than proportionate returns are obtained. In the field of exchange, it states that *if* the price of an article goes up, the demand for it goes down. In the sphere of distribution it suggests that *if* labourers decrease in number or increase their efficiency, wages will increase. In this way Economics all along shows that *if* certain things happen, certain results follow. The statements of the relation between cause and effect are known as *Laws*. Economics has established a large number of useful laws showing relationship between cause and effect. Economics, as such, is a positive science.

### **Economics as a Normative Science**

Economics is also a normative science. As a normative science, it is concerned with the formulation of the ideals suggested by economic considerations and aims at the maximisation of economic welfare of society. Normative Science of Economics is as yet in its infancy. Economists disagree on the point as to whether Economics can be regarded as a normative science or not, but it is now growingly realised that Normative Economics can and should exist ; and it does exist at present though in a rudimentary or elementary form.

### **Economics as an Applied Science**

Economics may also be regarded as an applied science. From this viewpoint, Economics may be defined as the subject which suggests the ways and means for the maximisation of production and accumulation of wealth ; and, through it, of economic welfare of society.

Economists, however, are divided on the issue whether Economics is an applied science or not. Conservative British economists strongly maintain that Economics is simply a positive science and not an applied science. ( According to them Economics should simply formulate the relation between cause and effect ; it should not propound rules of guidance. But economists of other countries of the world do not appreciate this view. The findings of the Science of Economics, they say, should be turned to good account ; and the methods for achieving maximum economic welfare should be formulated. Most of economists of the world hold this opinion ; and Economics has now begun to suggest practical ways and means for increasing the material prosperity of humanity. )



## § 3. IS ECONOMICS AN ART ?

You might have read, or you might have been told, that Economics is an art. Older economists were of this opinion. But modern economists consider this to be a mistake. This will be clear from the discussion that follows.

**Meaning of Art**

Art consists in doing something well. According to Professor J. K. Mehta, knowledge is science, action is art.<sup>3</sup> Artistes, men learned in arts and sociologists endorse this view.<sup>4</sup> As such, knowledge of every type is called science ; and it cannot be an art.

**Economics is only a Science, not an Art**

It should, therefore, be clear that Economics is only a science, and not an art. Economics is a branch of knowledge ; and because a body of systematized knowledge is called a science, Economics is a science. Economics as a branch of knowledge is not related to the doing of anything, hence it is not in itself an art. Professor Robbins recognises Economics only as a science and not as an art.

**Error of Old Economists**

Older economists thought that Economics is also an art. This was so because they used to define Art in the sense of Applied Science. According to them, Art is that branch of knowledge which tells us what to do and what not to do. But, in fact, this is the definition of applied science and not of art.<sup>5</sup> As such, their opinion was right, but their language was wrong. Instead of calling Economics an art, they should have called it an applied science.)

## § 4. ECONOMICS IS A SOCIAL SCIENCE

The science which studies human beings as members of society, is called a Social Science. Economics studies such activities of social human beings as are related to wealth. If a person is not a member of society, he is not studied under Economics. Therefore, Economics is a social science. In Economics we study such activities of social human beings as are related to the consumption, production, exchange and distribution of wealth. This is the subject-matter of the Social Science of Economics. It has been discussed in detail in Chapter 3.

**Professor Robbins's Opinion**

Professor Robbins does not agree with the view that Economics is only a social science. According to him, Economics is a social as well as an individual science. Social Science relates to the behaviour of human beings who are members of society, and Individual Science studies the behaviour of human beings who live in isolation.<sup>6</sup> Econo-

3 J. K. Mehta, *Groundwork of Economics*.

4 See D. S. MacColl, *What is Art*, pp. 14-15, Herbert Spencer, *First Principles*, p. 110 ; etc.

5 See A. N. Agarwala, *Reconstruction of Economic Science*, pp. 43-50.

6 We can also say that Social Science studies man as a member of society



mics studies activities of both classes of human beings. He gives two arguments in its support : (1) the behaviour of a social and an isolated individual is identical, and (2) the behaviour of an isolated individual can be easily understood and on its basis the behaviour of a social man can be easily comprehended.

### Criticism of Robbins's View

Robbins's opinion is not accepted by many sociologists. (1) Some of them do not accept the view that behaviour of a social and an isolated individual would be similar. (2) Some other thinkers—like Warner Sombert and other German economists as well as Professor Joad<sup>7</sup> and other English sociologists—maintain that even if an individual lives in isolation he remains tied to society through the change of centuries of civilization and experience. He does not become unsocial. As such, the study of the behaviour of an isolated individual is really a study of the behaviour of a social individual ; and a science which makes this study should be called a social science. A person who is isolated and cut off from society from his very birth and who has remained completely free of social impressions, is an impossibility.<sup>8</sup> (3) Professor Robbins has not defined Individual Science correctly. According to him, a Social Science studies a social human being and an Individual Science studies an isolated human being. But according to the accepted definitions of these terms, a Social Science studies human beings as members of society, and an Individual Science studies human beings in their individual capacity<sup>9</sup>. The really important thing is not the place where the individual lives—in society or in isolation. The really important thing is our point of view—whether we study a human being as a member of society or in his individual capacity. We can study a social individual and an isolated individual both, either from the social point of view or from the individual point of view.

In fact, most of the economists of the world regard Economics as a social science. Economists of Europe and America are of this opinion and in England herself many thinkers maintain this point of view.

### INTERMEDIATE QUESTIONS

1. Examine the nature and scope of Economics. (Bombay, I. A., 1940).
2. Is Economics a science or art or both ? (Karachi I. A., 1957).
3. Is Economics a science ? (Poona, I. Com., 1950).

whereas an individual Science studies him in his independent or personal capacity.

7 C. E. M. Joad, *Modern Political Theory*, p. 11.

8 See A. N. Agarwala, *Reconstruction of Economic Science* (Allahabad, 1946), pp. 90-103.

9. We have given this definition in Chapter 5, § 2 *postea*. In many books, Professor Robbins's definition is quoted in the present context but the accepted definition is given at other places. This confusion should be avoided.



## CHAPTER 3

### SCOPE OF ECONOMICS

It is the definite and exact money measurement of the steadiest motives in business life, which has enabled Economics far to outrun every other branch of the study of man.—*Marshall*.

Having discussed the definition and nature of Economics, we now turn to the problem of the scope of Economics. The student is generally found confused when he is asked to discuss the scope of Economics. To a very great extent this confusion is due to the fact that he does not know what is meant by 'Scope' or what exactly he is required to discuss.

By scope of Economics is meant the field exactly covered by the subject of Economics. To describe the scope, we must discuss :

- (1) What is the subject-matter of Economics ?
- (2) What is the nature of Economics as a branch of knowledge ?
- (3) What are the limitations of Economics ?<sup>1</sup>

#### § 1. SUBJECT MATTER OF ECONOMICS

Those activities of social, real and normal human beings, which relate to wealth, constitute the subject-matter of Economics. We agreed to, and explained, this statement in Chapter 1 and need not repeat the whole discussion here<sup>2</sup>. But we may further analyse and explain these activities below.

Economic activities originate from the feeling of certain wants by human beings, which press for satisfaction. Human wants are satisfied through the consumption of the articles or objects of desire. *Consumption* of wealth, then, constitutes the first group of economic activities. But, where does this wealth come from ? It is, of course, *produced* by men and women. In the early days of civilisation each man or family produced all the things which he or it wanted for his or its consumption, and satisfied the wants directly. Later on it was discovered that, as a general rule, a man has special proficiency in one particular work only ; and so if he devotes himself exclusively to that work, he could produce more wealth than what he could by devoting himself to the preparation of all the articles of his wants. One began to specialise in one occupation ; specialisation of occupations or division of labour was introduced.

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1 J. N. Keynes, whose book *The Method and Scope of Political Economy* has long been a classical work on the subject, defines scope to mean (1) the description of the subject-matter, (2) the nature of study, and (3) the relationship with other sciences. I do not think it is necessary to lay much emphasis on the third point except in so far as it is helpful in making the description of the subject-matter and nature of Economics vivid and clear. See my review of *Science of Economics* by Kapoor in the *Indian Journal of Economics*, Vol. XXII, page 108, as also *Reconstruction of Economic Science*.

2 If the student has to describe the scope of Economics in an answer to a question, he should, of course, discuss this point in reasonable detail.



Each man, then, began to give his surplus produce to others in exchange for the articles which he required and which others produced. *Exchange* of wealth thus made its appearance. Meanwhile another important fact dawned upon human beings. They found that they can increase production considerably if they work collectively or in a group rather than individually. This realisation discouraged the system of individual producers and brought the system of joint or collective producers, as happens in modern factories, into prominence. Then the questions arose: To whom does the wealth produced by their joint efforts belong? To all of them, naturally. If so, in what proportion should it be distributed among them? The problem of *distribution* of wealth thus emerged. After distribution takes place and each man gets his share, he spends his income on the objects of his desire. Wealth thus secured is consumed by him and his wants are satisfied. The circle of economic activities now becomes complete. *Economic activities, as such, divide themselves into four groups, viz., Consumption, Production, Exchange and Distribution. They together constitute the subject-matter of Economics.*

## § 2. NATURE OF ECONOMICS

Let us now proceed to answer the second part of our enquiry, *viz.*, What is the nature of Economics? In other words, is it a science? If so, of what type? Is it an art?

This has already been discussed in Chapter 2 *ante*, and the reader is referred to it for a proper answer to this query.

## § 3. LIMITS OF ECONOMICS

The limits of the subject of Economics have been carefully drawn up by its masters. They may be briefly enumerated here:

(1) Economics is not a complete study of all the human activities. It studies only those activities of human beings which are related to wealth.

(2) The measuring-rod of Economics is money. Hence it is concerned with those desires, aspirations and other affections of human nature, which can be approximately measured in terms of money. If I am prepared to paint a picture for a sum of Rs. 20, my desire to draw it can be measured with this sum; and this activity of mine falls within the scope of Economics. But if I paint a picture for the sake of pleasure, the question of money does not come in and then my activity will not fall within the scope of Economics.

(3) Economics studies the activities of those human beings alone who are members of society.

(4) The human beings whose activities are studied by Economics must be real and not fictitious.

(5) These human beings must also be of average or normal type.

(6) Economics is a positive science, a normative science, as well as an applied science. Some economists regard it merely as a positive science, but a large body of economists considers it to be a normative science as well as an applied science. According to the former the func-

tion of the subject is only to explore and explain and not to uphold or condemn, or prescribe rules for guidance. But according to the latter, Economics must discharge all these functions.

#### INTERMEDIATE QUESTIONS

1. Examine the nature and scope of Economics. (Bombay, I. A., 1940).
2. "The scope of modern economic theory has become narrow in certain respects and wide in other respects." Elaborate this statement giving examples. (Bombay, I. Com., 1949).
3. Discuss the scope and importance of the study of Economics. (Patna, I. A., 1952).
4. What do you mean by Economics? Indicate its scope. (Patna, I. Com., 1956).
5. Outline clearly the scope of Economics and discuss the value of the study of economic theory. (Punjab, Inter., 1950).



## CHAPTER 4

# DIVISIONS OF ECONOMICS AND THEIR INTER-RELATION

Nothing is so great an enemy to accuracy of judgment as a coarse discrimination ; a want of such classification and distribution as the subject admits of,—*Edmund Burke.*

Economics covers so wide a field that it has been found desirable to divide it into certain parts or divisions. A brief description of the divisions of Economics was presented in a previous chapter. Economics, it may be repeated, seeks to explain “the actions of men in *consuming* such wealth as they possess or obtain as the result of the efforts of themselves and of others : in *producing* further wealth for themselves or for their fellows by utilising and developing the resources of nature; in *exchanging* one with the other, a part of the wealth which they possess for other wealth which they desire; and finally it considers and investigates how and in what proportions the total wealth of community is *distributed* amongst its many classes and individuals”<sup>1</sup>. Thus we get the four divisions, namely, Consumption, Production, Exchange and Distribution. It may be noted at this stage that the State has begun to play a very important part in the economic life of a country so much so that *Public Economics* has now emerged as a separate branch of study. Public Finance is the most important topic of Public Economics.

### § 4 DIVISIONS OF ECONOMICS

#### 1. Consumption

Consumption of wealth is a comparatively new department of Economics. It discusses wants—their origin, nature and characteristics; the laws governing them; and how we can get maximum satisfaction of wants out of our expenditure. The importance of this study can be well realised from the fact that it is the necessity and desire to consume wealth which gives rise to all economic activities. The latter, again, come to a logical conclusion when the wants, which gave rise to them, are satisfied through the consumption of the wealth that is produced. Economics thus begins and ends with Consumption.<sup>2</sup>

#### 2. Production

The necessity or desire to satisfy wants leads to the production of wealth, which constitutes another branch of Economics. Under Production, we study the various factors of production, their characteristic features and their efficiency; the laws governing production ; how maximum wealth can be produced with the productive resources at our

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<sup>1</sup> Thomas, *Elements of Economics*, p. 2.

<sup>2</sup> Consumption is a new department of Economics, being added to it first by Marshall. Older economists long neglected it, but now its importance is fully realised. No treatise on Economics will be complete without it.



command ; and the problems of organisation, combination and trust<sup>3</sup>.

### 3. Exchange

The third division of Economics is Exchange. In the primitive stage of self-sufficiency, men consumed what they produced. Every family was independent of the outside world in producing and consuming wealth. There was, as such, no necessity of exchange. But as human ingenuity made progress, it was realised that a man cannot be equally skilful in all trades ; he generally possesses special aptitude for one occupation or for a few occupations only for which he is best fitted. Now, if each man produces only that thing which he can do most skilfully all the time, he will naturally produce the said commodity far in excess of his personal requirements. Similar will be the case with the producers of other commodities as well. All of them may, then, *exchange their surplus products* with the required articles produced by others. This arrangement, namely, the introduction of division of labour coupled with exchange, was believed to make people richer and better off than before. The scheme was actually put into practice, and it was found that it really increased the output and made people rich. This idea, once caught, has been adhered to steadfastly ; and today we possess a very complicated system of exchange. Australian wheat is consumed by Britons ; American machinery is used in Indian factories ; and Japanese toys are seen in the hands of Indian children. The area and machinery of exchange have been vastly improved in recent times.

Under Exchange, we explain how is it that a book costs, say, just Rs 3—neither more nor less ; how price is determined ; what are the agencies making exchange possible. We also make a detailed study of money, banks, markets, transport agencies and other auxiliaries of commerce.

### 4. Distribution

The introduction of division of labour was associated with the introduction of co-operative production. Originally each man produced wealth all alone, so that whatever he produced was his property. But it was found later that if several people work together jointly, the wealth produced by all of them together will exceed the total of what they could produce individually. This new development gave rise to one great difficulty, the difficulty of distributing the joint wealth among the producers. When the various agents of production produce wealth jointly, the wealth produced is the property of all of them ; on what principles, then, should it be *distributed* among them ? Distribution, as a department of Economics, thus came into being. Under Distribution we study the various agents of production, how is the share of each of them

3 It is sometimes discussed whether the study of Economics should begin with Production or Consumption. Some economists begin a treatise on Economics with Production because, they say, production is the foundation of Economics. Unless wealth is *produced*, consumption cannot take place. Production, therefore, should come before Consumption. Other economists give the first place to Consumption because it is the existence of wants pressing for satisfaction, which leads to the production of wealth. There is an increasing practice among economists to treat Consumption prior to Production and has been followed in this book.



in the joint produce determined, is our system of distribution just, and similar other problems.

*Distribution is the most pressing and difficult problem of Economics*, and has good scope for original work. The movement known as Socialism<sup>4</sup> is, at its bottom, mainly a result of the bad system of distribution. In the modern industrial society, the productive capacity has increased tremendously. On all sides we see gigantic factories, mills and farms. Now, such an increase in the scale of production of wealth should be ordinarily associated with the richness of all the members of the society. This, however, has not been the case. On the one side we see the rich, the capitalists who are getting richer daily, and who spend their lives in luxuries of all sorts and description. On the other side are to be seen the poor, labourers, and cultivators, who have to live on insufficient food, clothing and shelter. And while the masses do not get even the chance of satisfying their elementary wants, thousands of tons of coffee are burnt in railway engines in Brazil and hundreds of tons of cotton destroyed by U. S. A. each year ! What is the reason of this great paradox ? A very important reason is that problem of distribution of wealth has not been properly solved by modern communities. Capitalists do not give to labourers and cultivators their fair share of joint product. Thus a large part of wealth produced goes to a handful of men, while the large majority gets only a small part of it. The correction of this evil system of distribution is an important aim of Socialism. This line of thought has made the subject of Distribution the most important branch of Economics.

## 5. Public Economics

Besides studying these four branches of Economics, we shall also study economic problems faced by the modern Government. The branch of Economics devoted to the purpose is known as Public Economics.<sup>5</sup> It discusses such problems as follows : Should the Government intervene in ordinary economic life ? Should land be nationalised ? Should Government run the railways ? Should they enforce prohibition ? The most important subject of Public Economics is known as Public Finance which we shall discuss later on in detail.

### § 2. INTER-RELATION BETWEEN THE DIVISIONS OF ECONOMICS

From the above account of the divisions of Economics it should not be concluded that these departments are completely cut off from each other and that there is no relation between them. This division is purely a matter of convenience in study and analysis ; as it is, these divisions are the limbs of the same body and have close intimacy with each other.

*Consumption* is the beginning of Economics. The imperative

<sup>4</sup> Socialism is one of the most important international movements of today. Literature on Socialism is increasing rapidly. The variance in opinions on this subject is also tremendous. A case for Socialism has been made out by Spargo and Ainer in *Elements of Socialism* ; and against it by Hershaw in *A Survey of Socialism*. For an impartial study, see my *Socialism without Prejudice*.

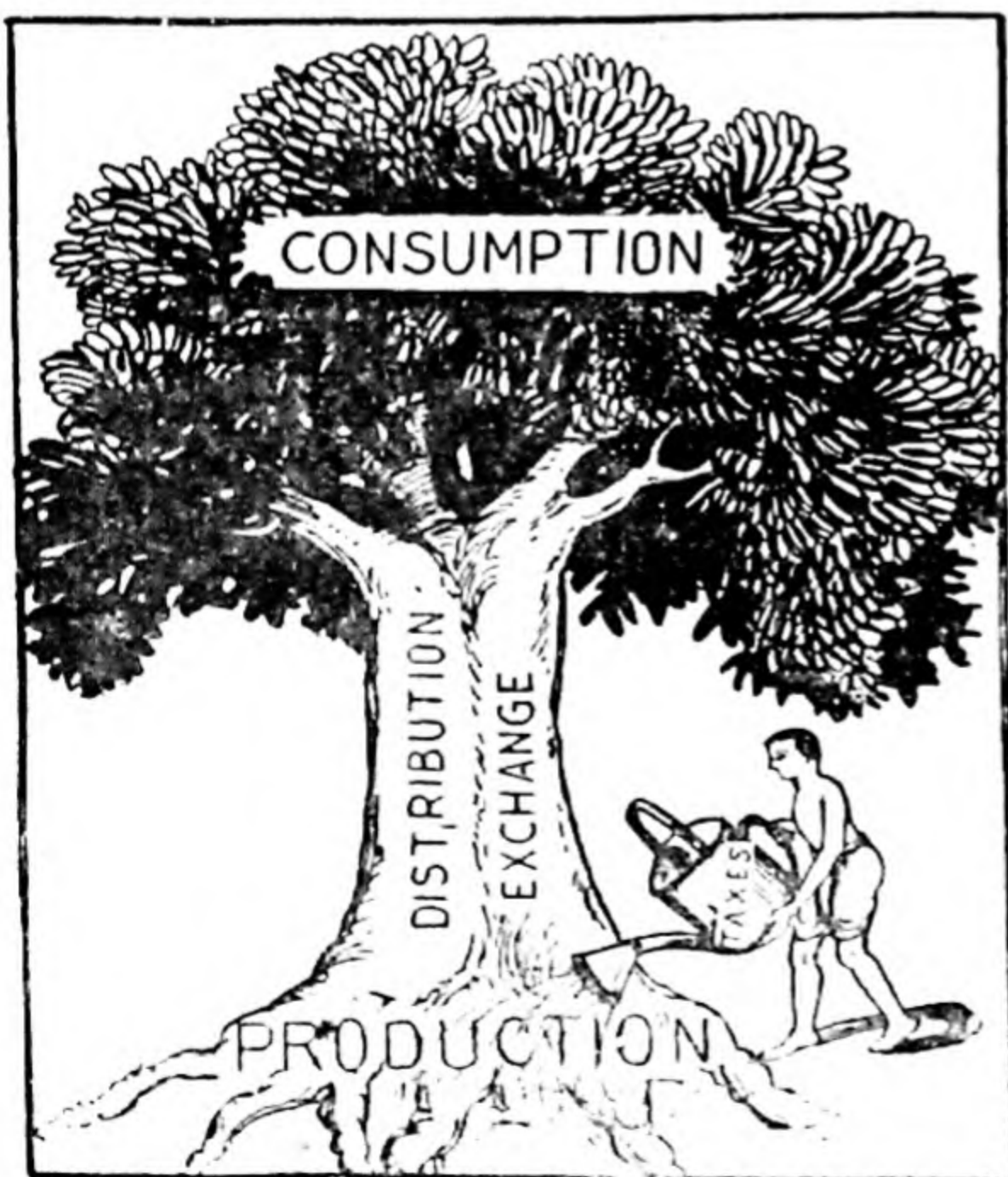
<sup>5</sup> Some writers mention *Public Finance* as the fifth division of Economics. But this is wrong since *Public Finance* is a part of *Public Economics* which, in fact, is the fifth branch of Economics.



need for the satisfaction of human wants leads to economic activities. These activities lead to the *production* of wealth which might be consumed for the purpose of satisfying wants. But productive efforts have, in modern times, become *specialised* and *co-operative*. By specialisation is meant that a person is now usually a specialist in the production of one thing alone. He produces only that thing which he can do most skilfully and exchanges it with the articles of his requirements, which are produced by others. Specialisation thus leads to *exchange*. By co-operative character of production, we mean that individuals no longer work alone; they work in groups instead. The wealth produced by a group of persons naturally belongs to all the members of the group and thus gives rise to *distribution*. When the wealth is distributed and each producer receives his share of income, he purchases the articles of his necessity with this money and *consumes* them for the satisfaction of his wants. The circle of economic activities thus becomes complete.

Consumption leads to production, and production, through exchange and distribution, leads back to consumption. *Public Economics*, the fifth division of Economics, comes in to watch and see that private individuals carry on economic activities to their own best advantage and to the best advantage of the society to which they belong.

Consumption may, as such, be described as the top of the tree of economic activities. The root of this tree is production; and exchange



and distribution are the stems which support the top. The analogy may be completed by comparing Public Economics with a gradener, who exercises supervisory powers and sees that the economic tree grows to the full and natural height, who protects and waters it, and prunes it according to the requirements of the moments.

We shall now describe the relation of each department of Economics with all the other departments.

### 1. Consumption and Production

The relation between consumption and production is quite intimate.

Fig. 4. Showing the economic tree. Consumption makes production possible. Goods are produced only because they are consumed; if certain goods are not likely to be demanded for



consumption, they will not be produced. Nobody will think of producing books in the land of the illiterate and liquors and intoxicants in the land of complete abstainers. Again, it is the consumption which makes people fit to carry on production. Just as consumption makes production possible, similarly *production makes consumption* possible. Goods can be consumed only if they are produced; and if they are not produced, they cannot be consumed.

*Consumption also determines the nature of production.* Producers produce only those things which are demanded for consumption. During the war time the demand for arms and ammunitions increases enormously, and these things are produced even to the neglect of other goods. In peace time the demand for the destructive goods is small and their production is correspondingly low. It is interesting to note how the nature of production changes with a change in fashions and tastes. There was a time when felt caps were largely in demand and were, therefore, produced in bulk. But now they have been replaced by Gandhi caps; and production has consequently shifted from felt caps to Gandhi caps. Just as consumption determines the nature of production, similarly *production moulds the character of consumption*. People can consume only those goods which are produced; and by discouraging or encouraging production of certain goods, their consumption can be reduced or increased. Under the Congress regime, for instance, the production and use of liquor has been prohibited in certain areas and the drinking of tea and milk popularised. The discontinuance of the production of liquor and the encouragement of the production of milk and other beverages has been having its effect on the nature of consumption.

*Consumption also limits the extent of production.* Producers try to anticipate consumers' demand for certain goods and produce it only to the extent of the likely demand. If they exceed this limit, their goods may not sell, and they may suffer a loss. *Production, similarly, sets a limit to consumption.* People, of course, cannot consume more than what has actually been produced.

## 2. Consumption and Exchange

Consumption in the modern society depends upon exchange. In primitive society, the relation between wants, efforts and satisfaction was direct. As soon as a want was felt by somebody, he made an economic effort, and the want was satisfied. If a man felt hungry he plucked wild fruits and appeased his hunger. Under this system, exchange was not necessary; wants were satisfied without exchange ever coming into the picture. But that state has long passed away. Now-a-days consumption is not possible without exchange. Man has now become a specialist and whatever he produces has to be exchanged for the objects of his consumption. Not only this; economic efforts are now made in groups. Each group obtains an income by the exchange of goods jointly produced; this income is then distributed among the members of the group. The latter, again, exchange the individual incomes for the objects of their consumption. Exchange has thus become inevitable for making consumption possible. *Consumption is similarly essential for the existence of exchange.* Unless a thing is an object of



consumption (directly or indirectly), it cannot be an object of commerce as nobody will ever purchase or sell it.

Under exchange we discuss value-in-exchange; under consumption value-in-use. And value-in-exchange depends, to a considerable extent, upon value-in-use. This tie binds consumption and exchange closely together.

### 3. Consumption and Distribution

The relation between consumption and distribution is very intimate in modern society. It is the necessity for consumption which leads men to make efforts. Productive efforts are now-a-days co-operative and joint. Hence, the joint produce, or the income derived from its sale, belongs to all the members of the productive group. This joint income is distributed among the members who then purchase and consume the objects of their desire. Evidently, then, consumption in modern days takes place only after distribution has been accomplished. Again, the nature and volume of distribution determine the consumption of society. If distribution is favourable to some and unfavourable to others, the former will have plenty to consume as compared with the latter whose consumption will be limited. The consumption of an individual, again, depends upon his income or the share of the national dividend he gets ; and the size of national dividend, upon actual production.

### 4. Consumption and Public Economics

Consumption is a field wherein the State finds ample room for interference in order to augment social welfare. The State interference is sometimes so drastic and far-reaching that the consumption of a particular article is altogether *prohibited*. Such step is taken only in case of those commodities which are extremely harmful. Liquor is such a commodity; so its consumption is sometimes prohibited by the State. The Congress Government have adopted the policy of prohibition due to this reason. The Government sometimes impose a less severe restriction in the form of a *tax*. When a tax is levied on a particular commodity, its price generally tends to rise. When people find that they have to pay a higher price than before for a certain article, they reduce, if not actually give up, its consumption. The State intervention in many other cases is very moderate; it takes the shape of *simple supervision*. For instance, the Government of U. P. have taken some steps to guarantee the supply of pure *ghee*. The supervision with regard to the true weights and measures is also an example. Such supervision improves the quantity, or quality, or both, of consumption if it is effective.

Public Economics depends upon consumption in certain ways. Necessity of the regulation of consumption is one of the reasons for the existence of a Government. Again, the income of the State depends to a certain extent upon consumption. The Government may expect to derive a certain amount of revenue from a tax imposed on the consumption of specified articles. But if the price of these articles goes up as a consequence and people reduce their consumption for this reason,



the expectation of the Government may not be realised and the budget might show a deficit.

### 5. Production and Exchange

*Production depends upon exchange.* In modern days, production is carried on not so much for the personal consumption of the producer, as for sale in the market. It means that almost all the goods produced are exchanged; and the goods which cannot be exchanged are not produced. As a matter of fact, the process of production is not complete until the goods produced are placed in the hands of final consumers; and exchange is the connecting link between production and consumption. Exchange makes possible large-scale production, division of labour and localisation of industries, and thus may be said to help production.

*Exchange, in its turn, is dependent upon production.* Unless an article is produced, it cannot be exchanged. And the larger the production, the greater the exchange activity. Through division of labour and large-scale production, production has contributed much to the growth of exchange.

### 6. Production and Distribution

Production affects distribution. Only that which is produced can be distributed. In other words, production determines the size of national dividend; and since national dividend is the amount which is distributed, also the magnitude of distribution. If production increases, distribution assumes larger proportions; if the former decreases, the latter shrinks.

Distribution also affects production. The nature of distribution determines the ability and willingness of labourers to work, and through it, the volume of production. If labourers feel that they are not given a just share of the wealth jointly produced, they remain dissatisfied and though they work in order to keep themselves alive, they do not labour whole-heartedly. Then, again, the distribution may be so unjust as to leave a very small income to workers, such that they may not be able to keep up their efficiency. Unjust distribution consequently injures both the ability and willingness of labourers to work and thus reduces the volume of production. If distribution is just, agents of production feel satisfied and contribute their maximum to production which tends to become large. The nature of production is similarly governed by the nature of distribution. If the latter tends to make the rich richer and the poor poorer, production will tend to shift from necessities to articles of luxury; and *vice versa*.

### 7. Production and Public Economics

The nature and volume of production largely depend upon the efficiency of the State. If the State guarantees the security of life and property and just system of distribution, production is pushed onward till it reaches the maximum limit. If, on the other hand, there is insecurity of life and property, if there is the danger of robbers or of warfare or of unjust taxation, production will be cut down to the minimum



possible limit. The policy of the State also determines the nature of production. If a backward country follows the policy of "free trade" in the modern days, it will tend to become agricultural; but if it adopts a "protectionist"<sup>6</sup> policy, it will tend to become industrialized.

Public policies also take into consideration the existing system of production and are so designed as not to injure it, and if possible to encourage it. Moreover, the income of the State is derived from taxes on the production of various commodities; and the larger the production, the greater the public revenue. Again, the larger the production, the greater the income per head and the larger the taxes on income and on personal consumption.

## 8. Exchange and Distribution

Whatever is produced by a group of producers is meant for exchange, and is sold in the market. The amount realized is distributed among the agents of production. In a modern society, then, exchange is a condition precedent to distribution. Again, the amount received by an agent is used by him for the purchase of the articles of consumption. Distribution is thus necessarily followed by exchange. Moreover, the amount to be distributed depends upon the price at which the goods produced have been sold. Exchange, thus, determines the volume of distribution.

Exchange is also influenced by distribution. If the volume of distribution is large, the income per head will be substantial and the things that the people will purchase (exchange) will be equally voluminous.

Exchange and distribution are very intimately linked together for another reason as well. Exchange studies the problem of the determination of prices in general. Distribution relates itself with the study of the determination of the price of specific objects, *viz.*, the factors of production. Distribution, as such, deals with certain special problems of exchange.

Public Economics has to deal with several problems of exchange. The entire exchange mechanism, and every link of that mechanism, is kept intact in an order by the strong governmental legislation and administration. The problems of the issue of metallic currency, the supervision of the banking system, the gradation and standardization of commodities, the weights and measures are also solved by the Government. If the Government neglects any of these duties, the delicately poised exchange mechanism may collapse and may bring ruin to the entire economic system. Exchange, as such, owes much to Public Economics; and the latter derives many of its problems from exchange.

## 9. Distribution and Public Economics

The State plays an important part in determining the nature of distribution. In a communistic State, the distribution of income takes place according to the wants of its members. In a socialistic State, on the other hand, distribution is according to the capacity of, or the work done by, each member. In a capitalistic economy, the principle

<sup>6</sup> The policy of allowing free import and export of goods is known as "free trade" policy. But when imports are checked through the levy of high duties (taxes on importation) with a view to develop some industries, the policy is said to be a "protectionist" policy.

is that of demand and supply. Even in the latter, where the State interference is minimum, the Government try to correct the injustice done to labourers through factory laws, public health programmes, etc. Taxation is now practised by almost all the modern States to correct the injury inflicted upon the workers by unjust distribution.

#### INTERMEDIATE QUESTIONS

1. Indicate as clearly as you can the relation between consumption, production and distribution of wealth. (Punjab, I. A., 1949).
2. What do you understand by production ? How is it related to consumption and distribution ? (Poona, I. Com., 1949).
3. What are the chief divisions into which the subject of economics is usually divided by writers ? Discuss the relations between the different divisions. (Raj., I. A., 1953).



## CHAPTER 5

### ECONOMICS IN RELATION TO OTHER SCIENCES

Because of the organic connection of these relations, their common origin, Man, and because Economics deals with the individual as he is, it is impossible wholly to dissociate the social sciences, and particularly impossible to divorce Economics completely, from Ethics and Politics. This does not mean that these sciences are all one and cannot be profitably sub-divided. On the contrary, because of the limitations of human mind, they must be studied separately so far as is possible.—*Ely*.

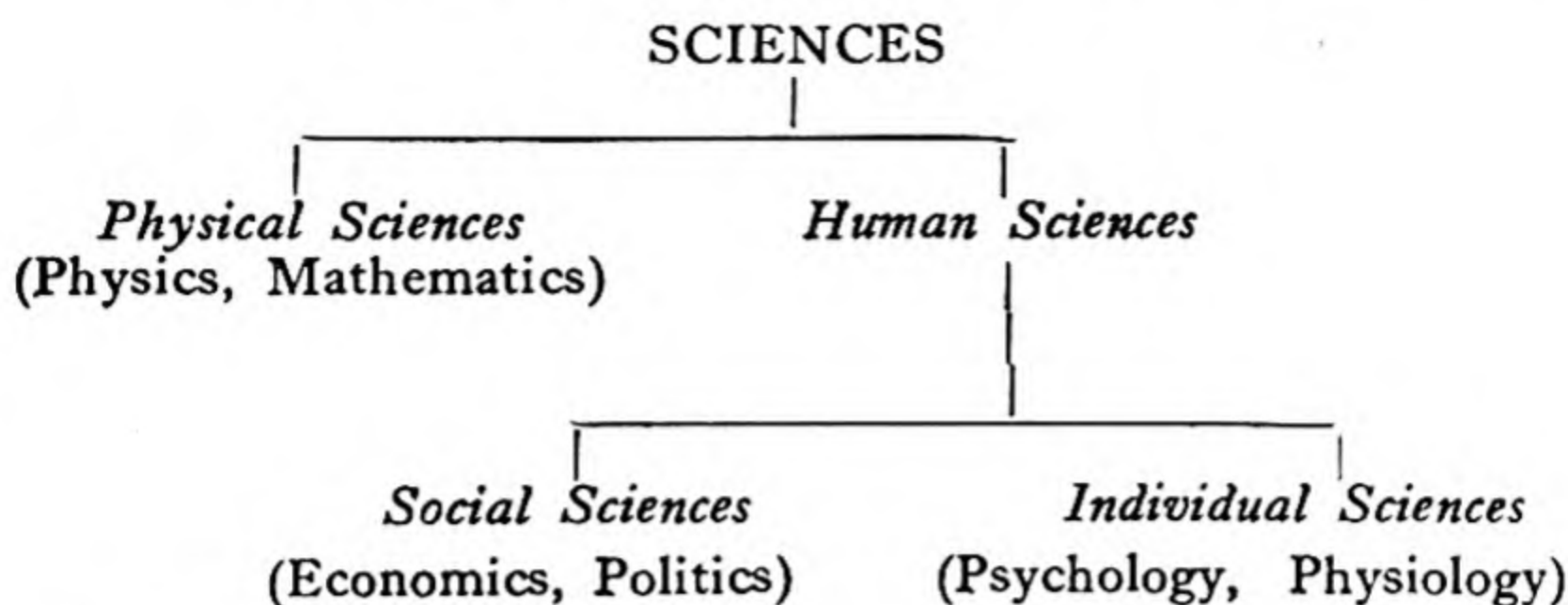
#### § 1. SEPARABILITY OF ECONOMICS

Economics is a science quite separate from other branches of knowledge. This does not mean that Economics has no relation whatever with other sciences. No subject, in fact, can be separated by any definite line of demarcation from all the others ; in some manner, more or less remote, every branch of knowledge is related to all the other branches. This is also true of Economics which has close intimacy with other sciences, all of which have richly contributed to its growth. It has been aptly remarked that "the economist takes from all sciences, by turns, all facts which bear upon the one subject, wealth ; considers them only so far as they bear thereon ; and puts them together and builds them up into a 'body of knowledge' which he calls "Economics". Had the assistance of other sciences not been available, Economics would have been quite different from what it is at present.

The intimacy of Economics with other sciences is very natural. Since the mind that has developed the various sciences is one and since many of them study the same object, namely, Man, there is a fair degree of unity, resemblance and interdependence between them. Economics is a separate science only in the sense that there is a definite and distinct field of study which constitutes the subject-matter of Economics ; but it is, on that account, not cut off from other sciences.

#### § 2. TYPES OF SCIENCES

Sciences can be divided into two broad categories : (1) those which study man ; and (2) those which study physical facts, *e.g.*, Chemistry, Physics, etc. The former are called *Human Sciences*, and the latter, *Physical Sciences*. Human Sciences are subdivided into two classes : (a) those which study human being *as a unit of society* and are called *Social Sciences* ; they are grouped under *Sociology* ; and (b) those which study man *as an individual*, *e.g.*, Psychology and Physiology. They may be called *Individual Sciences*. The classification of Sciences may be shown as below :



Economics is closely related to all the above branches of study—the Physical Sciences and the Individual Sciences.

### § 3. ECONOMICS AND SOCIAL SCIENCES

Social activities of human beings (or activities of men in relation to society) can be divided into four broad categories, corresponding to each of which there is a separate social science. They are as follows :

(1) Activities relating to *wealth*, *e.g.*, the earning of money and the consumption of *wealth* for the satisfaction of wants. Such activities are studied under *Economics*.

(2) Activities relating to *State*, *e.g.*, the administration of the country and the election of representatives to the Assembly. Such activities are studied under *Politics*.

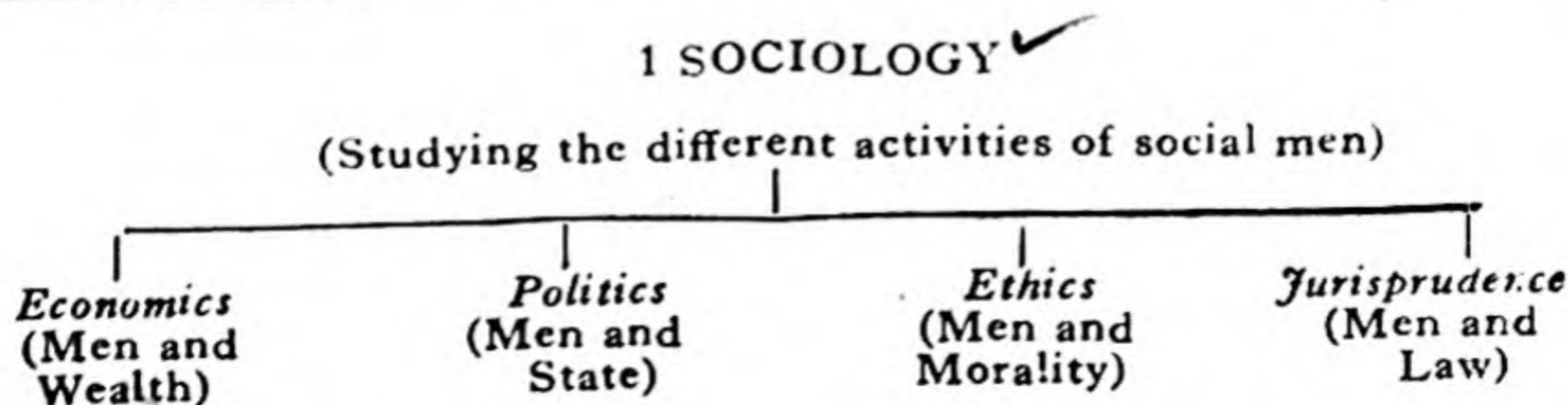
(3) Activities relating to *morality and right conduct*, *e.g.*, the speaking of truth, the feeling of pity for the weak and the poor. Such activities are studied under *Ethics*.

(4) Activities relating to *law*, *e.g.*, punishing the thief and imposing death penalty on the murderer. Such activities are studied under *Law* or *Jurisprudence*.

The diagram on page 32 shows the main branches of Sociology.

### Economics and Sociology

Sociology<sup>1</sup> is the name given to all the social sciences combined. Sociology is the parent science from which issue the various social sciences, *viz.*, Economics, Politics, Ethics and Jurisprudence. Economics, is, as such, a branch of Sociology, and studies those social phenomena which are related to wealth.





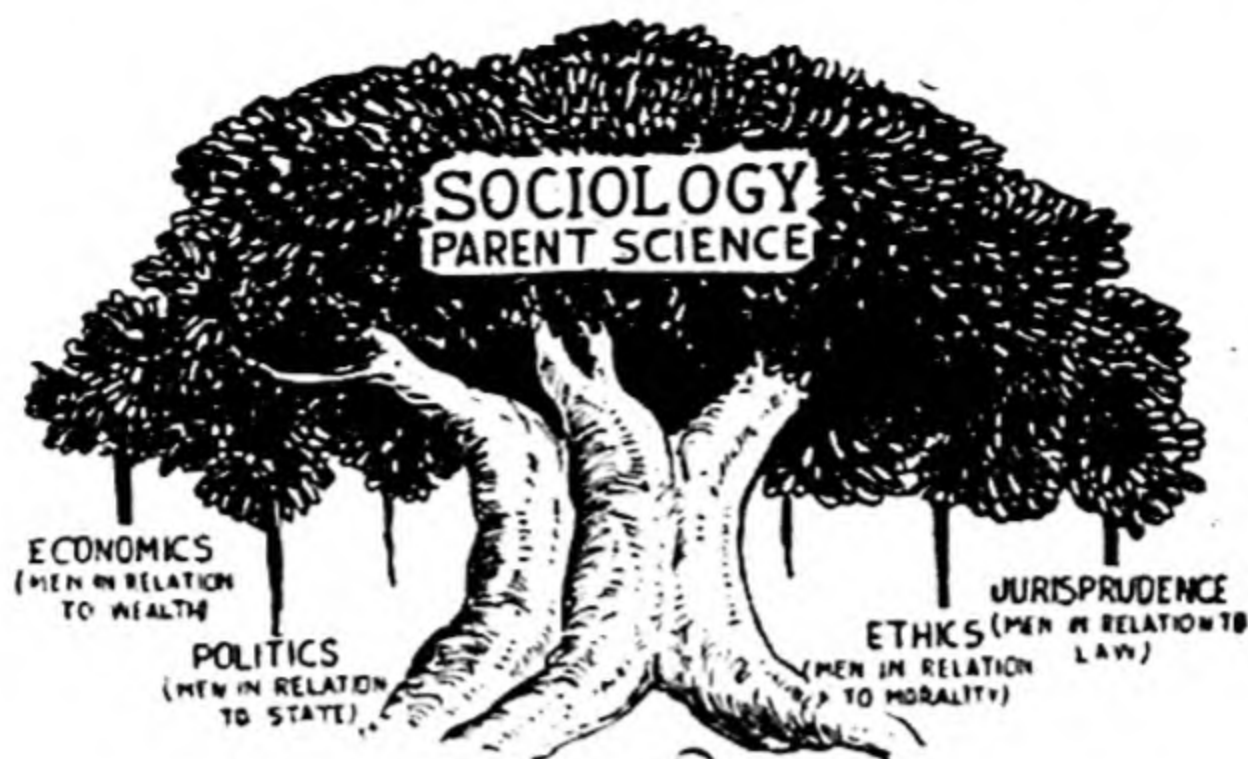


Fig. 5. Showing branches of Sociology

Economics takes into consideration many sociological facts like the gregariousness of human nature and the mutual effectivity of various social sciences in order to complete itself.

### **Economics and Politics**

Economics and Politics are both social sciences and have close intimacy with each other. Politics studies man in relation to State while Economics studies man in relation to wealth. Both of them study different aspects of human activities, the aspects which are closely related to each other. This fact has tied together these sciences in a very natural and definite sense.

All economic activities are carried on within the limits of the State and under its supervision. Naturally, therefore, the nature of the Government must decisively affect the economic system of the country. If the Government is just and fair to all, the people will work hard and sincerely and the country will be rich. In a badly and unjustly administered country, on the other hand, people will reluctantly cut down production to the minimum and the country will remain poor. Again, the system of consumption, production, exchange and distribution in capitalistic countries, like England and America, is quite different from what it is in a fascist country or in a communistic country like Russia.

The nature of Government is, in its turn, dependent upon economic conditions. The Government in the hunting stage was different from the Government in the handicrafts stage, and the latter, very much dissimilar from the present-day Government.

The absolute inseparability of Economics and Politics is testified by Public Economics which is common to both the sciences. Public Economics can be broadly divided into Economic Activities of the State and Public Finance.

The connection between Economics and Politics has become very close during recent years. The extreme form of this closeness is to be found in Russia where the Government owns, operates and controls almost the entire economic system. The same is true, to a



great extent, of fascist or totalitarian States. The capitalistic and democratic countries like England and America have also drifted to the principle of controlled economy and economic planning in order to solve their economic problems in partial imitation of Russia, Germany and Italy. During World War II, this control assumed absolute and through character in almost all the countries of the world. In India control of the Government has always been considerable. The slackness of the people to take to new ventures naturally led the Government to start their own enterprises. Railways, canals, etc., are all Government properties. The State intervenes in various economic spheres less directly through Agricultural Department, Co-operative Department, Industrial Department, Nation-building Departments, etc.

### Economics and Ethics ✓

Economics studies how wealth may be earned and spent. Ethics is the science of proper or right conduct. Since wealth is to be produced and consumed in the right way and since the right conduct of life includes the earning and disposition of requisite wealth, Ethics and Economics are intimately connected. All economic activities have an ethical aspect, as all ethical activities have an economic aspect. Each science has to recognise, respect and draw upon the other sciences.<sup>2</sup>

*Economics as a positive science* formulates the principles according to which rent, wages, interest and profits are determined. In the payment of all these rewards, the question of ethical justice enters. Positive Economics has to take account of these factors. *Economics as a normative science* sets up the ideal to be pursued in the economic sphere. It tells us what is fair rent, fair wage, fair interest and fair profit. It gives us the concept of just price, just taxation and just expenditure. All this work involves definite and certain ethical deliberation. Here the relation between Economics and Ethics is very close. The closeness becomes quite prominent when we consider *Economics as an applied science*. In the suggestion of the ways and means for the achievement of an ideal, Economics must act according to ethical dictates. If it means to act against ethical principles, it will be looked down upon and nobody will pay attention to it. For instance, Economics must not prescribe theft as a remedy of the poverty of the masses, for its moral effects will be very bad. People will probably begin to think that stealing is legitimate; an era of uncertainty and immorality will set in, which will check all progress. It is thus clear that Economics depends on Ethics to a fairly large extent.

### Economics and Jurisprudence

The science of Law or Jurisprudence lays down what people may or may not do. The economic life of the nation is shaped by its legal system. If the law of the land ensures security of life and

<sup>2</sup> "Since Economics, like Ethics, is primarily a Social Science, the true economic action must in the long run be an ethical action. The modern economist has become just as mindful of the ethical aspects of every economic problem as the modern moralist has been forced to recognize the economic side of his ethical problem. What is ethically advantageous must in the end also be profitable to the business world."—Seligman.



property and guarantees that each man will get fair remuneration for his labour and that he will be left free and secure to enjoy the fruits of his labour, people will get unlimited incentive to work, production will increase, and the country will be economically well off. But if the legal code does not provide security of life and property and allows some members of the society to appropriate a share of the product of others' labour, the productive mechanism will slow down, and the country will be economically poor. At the time of the break-up of the Moghul Empire in India, for instance, there was much disorder and danger to life and property, with the result that economic development of the country greatly suffered. But the maintenance of peace and order within the country later proved very favourable for its economic progress.

The effect of Law on Economics is very well shown by the inheritance laws, say of England and India. In England the law of primogeniture (that is, the inheritance of the property by the eldest son) has led to large holdings and concentration of land in a few hands. In our country, the law of equal inheritance has brought about exactly opposite results, namely, small holdings or possession of tiny plots of land by a large number of people. Almost every aspect of economic life, like trade, transport, combination, monopolies, weights, measures, adulteration, banking, currency, etc., are fashioned by the law relating to it.

Just as Economics is dependent upon law, similarly law is fashioned by the nature of economic conditions. The outbreak of World War II required the Government of India to collect large funds. Therefore, a law imposing tax on Excess Profits, known as Excess Profits Tax, was passed. The appalling condition of the factory labour in this, as in other countries, has led to the enactment of Factories Act.

Besides the above social sciences, Economics is also connected with History and Geography.

### **Economics and History** ✓

The close intimacy between Economics and History cannot be exaggerated. Economics has drawn upon History very considerably for its own development and perfection. The usefulness of History has been so fully realised by economists that they have included in their study the following historical surveys : (1) history of the economic development of a people, called *Economic History*, and (2) historical survey of the growth and formulation of economic theories, known as *History of Economic Thought*. These two branches of History have been of immense value to Economics.

(1) *Economic History*. Economic History is of great advantage to the economist. Firstly, it gives historical details about some economic phenomena like famines and business cycles which can best be studied in the light of past history. Similarly, history of excessive issue (hyperinflation) of paper currency in the post-War Germany and the post-Revolution France throws ample light on the theory of paper currency. Secondly, it furnishes the basic material out of which economic theories can be made. At the same time, it tests or confirms the various economic theories, thus affording a final proof of their accuracy



or otherwise. For instance, the Malthusian Law of Population has not been borne out in all its details by history and has, therefore, been modified now. Finally, the knowledge of the past sometimes enables us to foresee the future happenings and suggest ways and means of assisting, avoiding, or remedying them. Economic History, for instance, shows the repeated occurrence of business depressions and bank failures or crises. The possibility of their recurrence leads to their careful study along constructive lines.

(2) *History of Economic Thought.* History of Economic Thought is also of great importance to Economics. The study of a theory from its origin to the present stage is of evolution, and a similar study of other competing theories which it has superseded, makes its meaning and purport very clear. It also helps us not to repeat past mistakes ; and shows the scope for further progress. Moreover, the connection of economic doctrines with their underlying institutions and conditions makes the doctrine of relativity very clear ; while the dependence of Economics on other branches of knowledge is also brought to light.

### **Economics and Geography**

Geography is the study of man in relation to his environment. It studies how his activities are conditioned and shaped by his surroundings. The economic activities of man, namely, the activities relating to wealth, are definitely shaped and formed by his environment. As such, the intimacy between these two branches of knowledge is close. To a certain extent, economic conditions of a country form a part of Geography ; or a certain portion of the Geography of a particular country is economic in character. This portion, which is common to Economics and Geography, is known as Economic Geography.

#### **§ 4. ECONOMICS AND INDIVIDUAL SCIENCES**

Just as Economics is closely related to the sciences which study man as a member of society, similarly it is intimately related with those sciences also which study man as an individual. The most prominent among the latter sciences is Psychology.

### **Economics and Psychology**

Psychology is the science of mind and studies such mental phenomena as will power, motive power and power of concentration. These psychic phenomena are of immense value to an economist for these are exactly the things which he deals with. A study of Economics is fundamentally the study of the wants of men, the efforts made by them to satisfy them and their ultimate satisfaction. Wants, efforts and satisfaction are the main links of the chain of economic activities, each of which is a psychological process. Mostly speaking, the task of the economist is to measure these phenomena with the measuring-rod of money. Economics is, therefore, "anchored in Psychology."

Indeed, some economic laws are psychological in their nature. The Law of Diminishing Utility (which says that the more you have of a thing, the less you will want its each successive units, other things remaining the same) is the expression of a psychological fact. The



law of demand, the law of supply and the law of substitution simply show how human mind is likely to work under certain circumstances. The theory of trade cycles and industrial fluctuations has been partially built upon psychological findings. Fatigue, rest periods, agreeableness of work and pleasantness of surroundings, are all psychological processes and are studied by Economics.

### § 5. ECONOMICS AND PHYSICAL SCIENCES

Physical sciences study physical phenomena. Economics is related to these sciences inasmuch as it takes their conclusions for granted and on their basis formulates its own laws. Thus Chemistry says that matter can neither be produced nor destroyed. Taking this fact for granted, Economics defines production as the creation of utility, and consumption as the destruction of utility—and not of matter. The Law of Diminishing Returns, which has a proud place in the departments of Production and Distribution alike, is based on the findings of Agricultural Chemistry. Trade cycles and crises have often been explained with the help of astronomy. Jevons's "Sunspot Theory" of trade cycles and Moore and Beveridge's similar doctrines are astronomical.

#### Economics and Statistics

The science of Statistics is concerned with numerical facts. It collects, classifies, presents and compares numerical data relating to particular problems and then draws generalisations or laws from them. Economics also deals with quantitative and numerical data. The application of Statistics to Economics has, therefore, led to enormous benefit to our science.

Specifically, Statistics has the following usefulness to Economics. Firstly, statistics describe an economic phenomenon very admirably. For instance, if we wish to describe the foreign trade of a country, the description would not be complete unless we give statistics or figures of the exports and imports. Secondly, some economic problems are numerical; and here the dependence of Economics on Statistics is absolute. For example, if we want to find out how prices of gold have fluctuated since the beginning of the present century, we must have price statistics of gold for 56 years. Thirdly, there are some economic problems which cannot claim final accuracy until they have been tested by statistics. The Malthusian law of population is such an example.

From the above account the inseparability of Economics and Statistics can be well appreciated. In fact, there is a branch of Statistics which exclusively deals with economic problems and is known as Economic Statistics. As you progress in the study of Economics, you will find that you have to make liberal use of graphical methods like charts and graphs to illustrate your point, all of which fall under Statistics.

#### Economics and Mathematics

Even a science like Mathematics has been of great use to economists. For a long period the application of Mathematics to

Economics had been a subject of controversy. On the one side were economists of the standing of Cournot, Jevons, Edgeworth and Pareto who made extensive use of Mathematics in their study of Economics and testified to the extreme usefulness of the process. Jevons went to the length of stating that Economics is essentially mathematical in its nature,<sup>3</sup> a statement which is taken to mean all quantitative data. On the other side were economists like Mill, Cairnes and Leslie who showed their disinclination towards the application of Mathematics which, in their opinion, was barren and useless to Economics.

This controversy has now been set at rest and the usefulness of the application of Mathematics to Economics, which constitutes the subject-matter of Mathematical Economics, is well realised. Economics is, in fact, rapidly becoming mathematical. The mathematical method stimulates precision of thought and clarifies the relationship between economic factors, like demand, supply and price, in an admirable way. But too much dependence on it leads to economic toys and useless mental gymnastics. If used with proper precautions, it has the possibilities of showing good results.

#### INTERMEDIATE QUESTIONS

1. Discuss carefully the relation of Economics with other social sciences. (Madhya Bharat, I. Com., 1953).
2. Describe the relation of Economics to other social sciences. (Osmania, I. A., 1951).
3. What is the relation of Economics to Politics, Ethics and Sociology? (Poona, I. Com., 1950).
4. Show in what manner Economics is related to other social sciences. (Raj., I. Com., 1952).

<sup>3</sup> "Economics, if it is to be a science at all, must be a mathematical science . . . simply because it deals with quantities".—Jevons, *The Theory of Political Economy*, p. 8.



## CHAPTER 6

### ECONOMIC LAWS, METHODS AND ASSUMPTIONS

There is not a single law, economic or other, on which we may depend absolutely. The validity of natural law is conditional upon the orders of the universe not being overthrown; that of economic laws, upon no fundamental change taking place in human nature, as we know it. If ever a change should come then, indeed, no economic law will be valid.—N. G. Pierson.

#### § 1. ECONOMIC LAWS

##### The Meaning of Economic Laws

While going through this book, you will come across various '*Laws*'. These Laws are scientific laws and should not be confused with statutory (*i.e.*, legal) or customary or moral laws. Economic laws establish the relationship between cause and effect, and are, therefore, of scientific nature.

An economist studies human actions in the ordinary business of life, tries to find out the connection between causes and effects, and then expresses them in the form of general statements. Such generalizations are known as Economic Laws. For instance, economists observe that if the price of a commodity goes down, the demand for it increases. Let us take the example of pencils which can be purchased at 2 annas each. If the price comes down to one anna per pencil, you may be tempted to purchase more pencils than before. This is true with regard to all the articles. From this, the economist generalizes that if price falls, demand increases. This is an economic law—the law of demand; it is the statement of a tendency and seeks to show the connection between cause and effect. Such *generalized statements of human tendencies concerning wealth are known as Economic Laws*.

Economic laws have two main characteristics. Firstly, they are social, dealing as they do with the conduct of men considered as members of society. Secondly, they refer to economic motives, the motives which can be measured by money. Marshall, therefore, defines economic laws as follows: "Economic laws, or economic tendencies, are social laws relating to branches of conduct in which the strength of the motives chiefly concerned can be measured by a money price".<sup>1</sup>

##### Types of Laws

It is obvious from the above that the term 'law' is used in Economics in a scientific sense. The word, in general usage, is used in various other senses as well, of which the reader is probably aware. A law may be statutory, or moral, or customary, or scientific.

*Statutory Laws* are the ordinances of the Government and require the members of the State to do or not to do certain acts. For instance,

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<sup>1</sup> Marshall, *Economics of Industry*, p. 26.

the Indian Criminal Procedure Code requires a man not to cause physical injury to any person; such an offence is punishable by imprisonment and other penalties. These laws are generally enacted by a particular State which enforces it within its jurisdiction; outside this limit they are inapplicable. Those who break the law are punished. Statutory laws are not fixed in character for all the time to come; and are amended from time to time. From the above account of statutory laws, their difference from economic laws becomes clear. Economic laws are not passed by any particular State; nor is their operation restricted to any particular country. They are the expressions of human tendencies and are true of all human beings and of all countries. They do not enjoin people to do or not to do certain acts. Nor are their offenders punished by any authority.

*Moral Laws* are the laws dictated by moral and ethical considerations and require men to act in accordance with those dictates. For instance, the ethical commandments to speak truth and to be kind to others are moral laws. Offenders of such laws are supposed to be punished by the Almighty in this world and the world to come. Economic laws are definitely not of this nature. They are not moral commandments; nor do they call the wrath of God upon the offenders.

Then there are *Customary Laws*, that is, the laws established

by customs and traditions. In Hindu society, for instance, there are definite customary laws regarding the ceremonies to be performed at the time of marriage or death of somebody. Economic laws are, of course, different from customary laws.

Finally, there are *Scientific Laws* which establish relationship between cause and effect. Economic laws perform exactly this function. Therefore, economic laws are scientific laws.

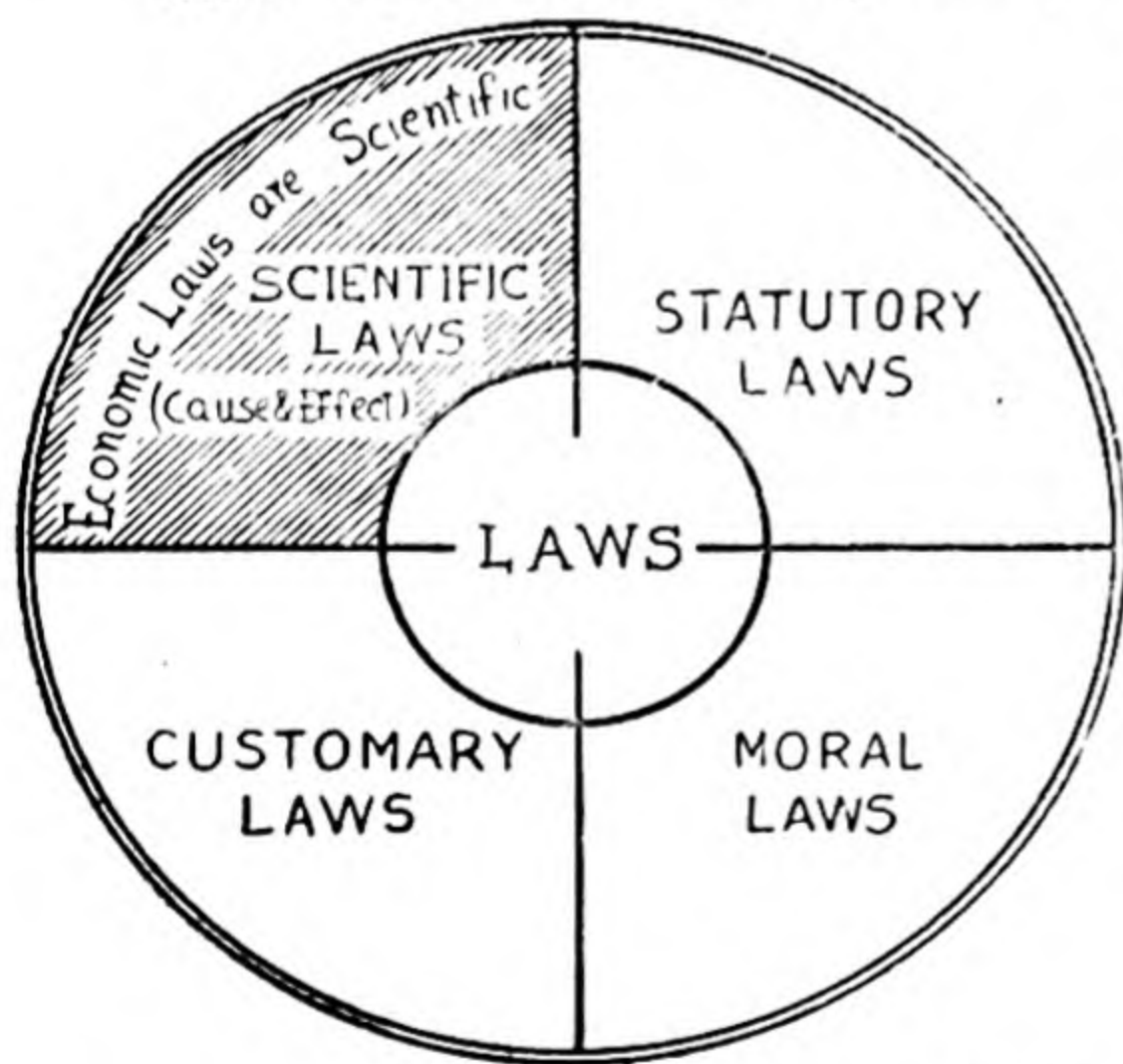


Fig. 6. Showing the various kinds of laws.

### The Inexactness of Economic Laws

Economic laws, as said above, are the statements of certain *human tendencies*. In other words, they simply state that under certain circumstances, human beings *tend* to act in a certain fashion. They do not assert that a man must necessarily behave in the stated way. Human beings have free will and they may or may not act in that manner. Economic laws only say that they will *most probably* act in a particular fashion under particular circumstances.



This point may be easily illustrated. The law of demand states that if price rises, the demand will fall. This is what usually happens in daily life. But there *are* cases when the demand rises immediately after a rise in price. During the war period, for instance, the prices of arms and ammunitions rose up sky-high, but still the demand for them went on increasing tremendously. Again, suppose Pandit Nehru comes to Allahabad and nobody can see him unless he wears a Gandhi cap. In such a case the demand for Gandhi caps will increase tremendously even if the price of such caps rises fairly high.

It must, however, be admitted that there are certain laws in Economics which are exact under all circumstances. The law of diminishing returns is such a law. After a certain point in cultivation is reached, the application of each successive dose of labour and capital is bound to yield diminishing returns, provided other things remain the same. This law has two assumptions, namely, the arrival of a certain point in cultivation and the unchangeableness of other things. If these two assumptions obtain in practice, the law will definitely operate. There is no exception to this law.

We conclude, therefore, that some economic laws are absolutely correct ; but a large number of economic laws have an element of uncertainty or inexactness. The reasons for this inexactness are mainly two. Firstly, men and women whom Economics studies are living beings and possess free will. Their acts are, as a consequence, so variable and uncertain that the best statements of tendencies about human conduct must necessarily be inexact and faulty. Secondly, economists do not have the facility of performing experiments under desired conditions, as can be done in a laboratory, so that absolute correctness in the formulation of the laws is not possible.<sup>2</sup>

### **Economic Laws Compared with Physical Laws**

Economic laws are not as accurate as physical laws which are absolutely exact. The laws of physical science relate themselves to physical facts which are unchangeable, certain and of universal application : physical laws, as such, also possess similar characteristics. Moreover, physical laws can be derived and tested under laboratory conditions, which helps in their correct formulation. The law of gravitation (which states that a body is attracted to the ground), for instance, is a physical law and is exact and certain. Whether you throw a hat or a coin in the air, it must come down ; and whether you do so in Allahabad or in Calcutta, in London or in New York, is also immaterial. Similarly, the attraction of iron by a magnet if both are placed near each other,

Since an economist can very rarely experiment he must content himself with watching the changes that take place in conditions, and their results, and arguing as to the meaning of his observations. It is largely due to this fact that economic laws are far less definite, and open to many more exceptions, than is the case in science where systematic experiments are possible. It is very difficult to be sure that we have not overlooked some change in the conditions, that has taken place ; and even serious students may thus be misled and may attribute a result to a cause which in fact has had little or nothing to do with it, just because they have overlooked the true cause or causes. See Moreland, *An Introduction to Economics*, pp. 6-7.



is a fact of invariable exactness and universal application. These illustrations show that physical laws are absolutely exact and universally applicable. If we compare economic laws with physical laws, we find that our laws are inferior to physical laws in points of exactness, invariability, and universality of application<sup>3</sup> for reasons already explained.

Marshall observes that there are no economic tendencies which are as steady in operation and as precisely measurable as gravitation and consequently there are no laws of Economics which can be compared with the law of gravitation. But they can be very well compared with the laws of tide which are not always exact—their operation may be obstructed by heavy rainfall or strong wind. In the opinion of Marshall, as such, the laws of Economics should be compared with the law of tides rather than with the law of gravitation.<sup>4</sup>

### **Economic Laws are the Most Exact Social Laws**

Economic laws are not so exact as physical laws, but they are the most exact of all the laws of social sciences. The reason why economic laws are superior in point of exactness to all other social laws is that economic motives can be measured by the measuring-rod of money, while no other social science has the facility of quantitative measurement. In Economics motives are measured by money—rupees annas and pies. If you want a pen and will offer Rs. 10 for it rather than go without it, the intensity of your want for the pen can be measured by Rs. 10. Similarly, if you will charge 4 annas for typing out a page, the displeasure of typing out a page can be measured by 4 annas. This privilege of measurement, which is denied to other social sciences and is available to Economics, goes a long way in making Economics fairly exact—more exact than any other social science.

### **§ 2. METHODS OF ECONOMICS**

Every science arrives at its conclusions, generalisations and laws through some logical process. This logical process by which we arrive at generalisations or laws of a science, is known as its *method*. Economics makes use of two important methods, namely, the deductive method and the inductive method.

#### **Deductive Method**

Under the deductive method certain basic propositions regarding human nature are taken for granted and from these propositions broad generalisations are derived. For instance, it is a fundamental fact that all men die one day. Smith is a man. Therefore, he will die one day. This is a simple example of the deductive method. Jevons aptly describes deduction as “getting knowledge from other knowledge”<sup>5</sup>. A large number of economic laws has been discovered in this way. The economic law of diminishing utility has been arrived at deductively.

<sup>3</sup> Prof. Robbins argues that economic laws are as precise, within the limits of the assumptions, as, or even more precise than, physical laws. See Robbins, *The Nature and Significance of Economic Science*. Also see Knight, *Scientific Method in Economics*, in the *Trend of Economics* (Tugwell).

<sup>4</sup> Marshall, *Principles of Economics*, pp. 31-32.

<sup>5</sup> Jevons, *Logic*, p. 13.



We know that men do not generally attach as much importance to the second unit of an article as to the first; and not so much to the third as to the second; and so on. From this psychological fact it has been deduced that as the stock of a commodity increases, the utility of each additional unit goes on diminishing, other things remaining the same.

Early economists made use of the deductive method alone. But the exclusive devotion to the deductive method, to the neglect of the inductive method, misled them. Even the fundamental propositions about human nature with which they started, were sometimes wrong; and they, moreover, did not verify their generalisations by actual observations. The laws arrived at through such defective deduction were naturally faulty. Undue and exclusive emphasis on deductive methods thus put the cart of Economics on wrong lines. German economists first revolted against this state of affairs and introduced the inductive method in Economics. Since then, the popularity of the inductive method has widely increased.

### **Inductive Method**

According to this method, we first observe the relevant points concerning a particular phenomenon, which are collected in the form of data and subjected to close scrutiny. Generalisations are then drawn which are known as laws.

Malthus followed this method in formulating his theory of population, namely, that population increases faster than food supply. He carefully studied the history of all the important countries of the world and from the facts thus collected, derived the Law of Population.

### **Inductive Method vs. Deductive Method**

It is sometimes debated as to which of these two methods is of greater use and importance in Economics. It is the opinion of modern economists that both of these methods are important and useful. "Induction and deduction are both needed for scientific thought as the right and left foot are both needed for walking."<sup>6</sup> In those departments of Economics where facts and data are not easily available, deductive method is largely used, as for example, in Consumption, Exchange and Distribution. But where adequate facts and data are available and the fundamental propositions about human nature are lacking, as for example, in Production, the inductive method is generally used. Our subject of Economics would have been very imperfect and ill-developed today were both these methods not utilized according to their suitability and propriety.<sup>7</sup>

## **§ 3. ASSUMPTIONS OF ECONOMICS**

Economic laws are ordinarily accompanied with certain conditions; in other words, they are limited by certain assumptions. They

<sup>6</sup> A sentence from Schmoller, a great German economist, which has become classic.

<sup>7</sup> All the devices for the discovery of the relations between cause and effect which are described in treatises on scientific method, have to be used in their turn by the economist; there is not any one method of investigation which



always state that provided such and such things exist, this cause will lead to this effect. The reason why economic laws involve assumptions is that human beings, whom Economics studies, have free will and are under certain circumstances influenced by a large number of considerations. All such variable factors cannot be taken into consideration at one and the same time. Economics, therefore, takes certain conditions or assumptions for granted, and states what will be the result of certain casual forces under the assumed circumstances.

The most important assumption made by economic laws is "*other things being equal*" or "*other things remaining the same*". The implication of these phrases is different in different cases, and depends upon the context in which they are used<sup>8</sup>. Other assumptions are the existence of free competition, no-rent land, human propensity to be led away by monetary considerations, etc. Some pertinent remarks have been made by Marshall on this subject, which may be quoted here in *toto* :

It is sometimes said that the laws of Economics are "hypothetical." Of course, like every other science, it undertakes to study the effects which will be produced by certain causes, not absolutely, but subject to the condition that *other things are equal*, and that the causes are able to work out their effects undisturbed. Almost every scientific doctrine, when carefully and formally stated, will be found to contain some proviso to the effect that other things are equal: the action of the causes in question is supposed to be isolated; certain effects are attributed to them, but only on the *hypothesis* that no cause is permitted to enter except those distinctly allowed for. The assumptions made by certain economists are not exactly true but they are a near approach to reality. We already come across perfectly free competition, but in stock exchange markets and elsewhere, this position is approximately reached. No-rent land is not generally to be found, but land paying negligible rent is not a rare occurrence. Man is guided by religious, patriotic, political and other considerations, but a consideration of wealth is of definite importance. It is clear then that our assumptions are nearly correct and, therefore, the laws based on them are close approximation to reality.

can properly be called the method of Economics, but every method must be made serviceable in proper place, either singly or in combination with others . . . . . But in some branches of economic enquiry and for some purposes, it is more urgent to ascertain new facts, than to trouble ourselves with the mutual relation and explanations of those which we already have. While in other branches there is still so much uncertainty as to whether those causes of any event which lie on the surface and suggest themselves at first are both *true* causes of it and the *only* causes of it, that it is even more urgently needed to scrutinize our reasoning about facts which we already know than to seek for more facts.—Marshall, *Principles of Economics*, pp. 29-30.

8 It has been forcefully stated by certain writers in recent times that economic laws assume other things to remain the same, which they never are. Economics is, therefore, an unrealistic science. See Mrs. Barbara Wootton. *The Lament for Economics*.

#### INTERMEDIATE QUESTIONS

1. Explain the distinction between an economic law and statute law, and show how all economic laws are mere statements of tendencies. (Andhra, I. A., 1950).
2. Explain the nature of Economic Laws, and show how "Economics does not give us conclusions directly applicable to policy." (Bombay, I.Com., 1939).
3. What are economic laws? How does they compare with the laws of Physical Sciences? (Patna, I. Com. 1949).
4. "Economic laws are hypothetical and provisional in character." Discuss this statement. (Travancore, In., 1943).



## CHAPTER 7

### WHY DO WE STUDY ECONOMICS ?

The investigation of the conditions of wealth by Adam Smith and his successors has already resulted in the removal of monstrous delusions which a century ago profoundly affected the legislation of every civilized country to the inexpressible injury of the commonwealth of nations. The first fruits of Political Economy have been worth a million times the intellectual effort that has been bestowed upon the subject,—*Walker*.

There are two possible reasons for the study of a subject. It may be studied merely for the sake of the pleasure and enlightenment that the study affords; this object is called the 'light-bearing' or theoretical object. Or it may be studied with the object of deriving help in practical affairs of life; this latter object is called the 'fruit-bearing' or practical object.

The study of Economics has two-fold importance—theoretical as well as practical; in other words, it affords us pleasure as well as helps us in practical affairs of life. It is thus better than a subject like Philosophy which is only light-bearing.

#### § 1. THEORETICAL ADVANTAGES OF ECONOMICS

The nature of economic study is such that anybody who takes to it is immensely benefited in more ways than one. Economics has aptly been described by Marshall as "an engine for the discovery of concrete truth"; and its student develops all the qualities which are necessary for this discovery. It firstly develops in the mind of its student logical efficiency and faculty of observation. Direct experimentation under laboratory conditions not being possible in this branch of knowledge—we cannot catch a man and subject him to certain economic forces to see what happens—economic laws are arrived at either by proceeding from broad truths regarding human behaviour, or by collecting facts through observation. The first method, known as deductive method, affords us a better view of man and matter. The second method, known as inductive method, makes us acute observers.

Again, the data that a student of Economics has to handle are so enormous and of so varying importance that he has to pick out of them the relevant facts and to set apart the irrelevant facts. Economics thus develops the faculty of judging the comparative importance of various considerations without any mechanical assistance, a quality which is of very great value.

Apart from these qualities which a student of Economics acquires, he is also benefited by an increase in the total stock of his knowledge and a clear insight into the complicated economic mechanism of which he constitutes a limb. Economics relates to him the detailed story of the *consumption* of wealth; how this wealth is *produced* and what are the factors that contribute to increase production; how *exchange*



takes place and what fixes the value or price of any commodity; how wealth is *distributed* and incomes are earned and why is it that some are rich while others are poor. It seeks to show him what place he and his companions fill in the economic structure of the nation, how the firm by whom they are employed functions as a part of the business machine and how the industry of which that firm is a member is related to other industries, and how does it work in harmony with them for a common end.<sup>1</sup> A study such as this provokes a sense of serious thought on matters of vital importance by throwing a flood of light on the different parts of the economic system to which we are linked.

## § 2. PRACTICAL ADVANTAGES OF ECONOMICS

Economics is useful not only from the point of view of theory but also from the point of view of practice.<sup>2</sup> Though it is still a matter of dispute among economic authorities whether Economics can issue rules and regulations for guidance in practical life or not, a large majority of economists definitely believes that the practical value of Economics is supreme.

The study of Economics is so many-sided and so vast that it throws light on a surprisingly large number of practical aspects of human life. It affords practical guidance to householders and businessmen, labourers and capitalists, reformers and statesmen alike. Besides being of much practical importance to individuals, it is of great benefit to the society as a whole.

### UTILITY OF ECONOMICS TO INDIVIDUALS

#### Utility to Householders

Let us start from the house which is the most familiar place to each and all of us. If we think a little carefully, we will find that Economics is of undeniable benefit in the conduct of household economy. It suggests to the householder the broad principles by following which he can get maximum return out of his expenditure. It offers to his consideration the Law of Equi-Marginal Utility which directs him to spend his money in such a way that the utility of the last unit of money spent on each of the various heads may be almost equal; for by following this rule, he can derive maximum benefit out of his expenditure. Similarly, Economics emphasises the wisdom of keeping proper family budgets which show whether expenditure over various items is being done prudently or not. For instance, a man may be spending freely on intoxicating liquors and drugs or on cinema shows and the like, and this expenditure may be so disproportionately large that inadequate amount may not be left to take care of other important items of expenditure like food, clothing and shelter. In such a case the heavy item standing against intoxicants or the cinema shows will suggest that

1 Thomas, *Elements of Economics*, p. 19.

2 Economic Science is chiefly valuable neither as an intellectual gymnastics nor even as a means of winning truth for its own sake, but as a hand-maid of ethics and a servant of politics.—Pigou, in *Memoriam: Marshall, Memorials of Alfred Marshall*, p. 84.



life can be made richer and fuller by diverting this expenditure to other more important heads.

### Utility to Businessmen

Let us now pass on from the household to the business field and see how Economics is useful to the businessman. In a narrow sense, Economics is the science of which business is the art. Economics is, therefore, important for the businessman just as knowledge of law is important to a lawyer and knowledge of medical science to a doctor. The study of Economics, moreover, imparts a habit of thought and a familiarity with concepts invaluable to the man in big business, who to be successful must have a deep comprehension of principles involving a network of mutually dependent phenomena. The solution of various business problems requires a profound knowledge of economic principles. Some of the most careful students of Economics have been famous business magnates.<sup>3</sup>

To give a few examples, the subject of the methods of wage payment makes a thorough study of the technique, advantages and disadvantages of the various methods in existence and then suggests which method is suited under which circumstances. This study is of profound significance to businessmen. Rationalization, scientific management, large-scale production, division of labour are other subjects of the same nature and their accurate knowledge enables businessmen to avoid pitfalls and follow the best course.

Professional men, like doctors, professors and lawyers, also benefit from Economics in various ways. Economics solves their very important problem of devising methods for increasing their income. This can be done, Economics teaches them, by increasing efficiency; and it also states the ways and means of increasing efficiency.

### Utility to Labourers

Even such a simple man as a labourer can profit from the study of Economics. Economics tells him the reason why he gets a *particular amount* as wages, neither more nor less; and how can that amount be increased. It communicates to him the correct picture of his contribution to the economic system and also if his wages are proportionate to that contribution. At the same time it also makes him realize the importance of the part the *entrepreneur* plays in economic life. Thus while it encourages him to claim his proper remuneration, it also leads him to appreciate the position of his employer, so that his demands may not be unfair. The study of causes, effects and remedies of strikes and lock-outs and the history of trade unions are likely to save a country from uncalled for and unreasonable interruptions in the otherwise smooth running of the economic system.

### Utility to Statesmen

If Economics is useful to ordinary labourers, it is no less beneficial to statesmen. It apprises the practical politician of the current economic problems and also suggests their correct solutions. Politi-

<sup>3</sup> See Turner, *Introduction to Economics*.



cians make them the political issues of the day, the staples of their activity. There is, however, one distinct field of Economics, called Public Finance, where the debt due by the statesmen to Economics is undeniably heavy. Economics teaches the statesmen the ways and means of running the finances of a Government, and the methods of solving the financial problems as and when they arise, the problems which rank supreme in the modern days of increasing State expenditure.

### Utility to Social Reformers

Social reformer is the first cousin to the practical statesman and joins him in his indebtedness to Economics. Social reformers have one main aim, *viz.*, to increase the welfare of society. Economics which studies how social welfare can be increased through material means, is as such of great help to them. Many of the economic issues can be solved, to fair degree, by social reform movement. Such issues take the form of social problems and fittingly occupy the attention of social reformers. For instance, India is facing today the problem of over-population. If social reformers start a movement in favour of the reduction of population through the exercise of self-control and the use of birth control devices, much good can be done. On many social problems, as for example, caste system, joint family system, and female and infantile mortality, Economics has much to say and recommend. Social reformers accept the findings of Economics in such cases and base their actions on them.

### UTILITY OF ECONOMICS TO SOCIETY

Economics also contributes to the welfare of the society as a whole, just as it augments the welfare of its each member.

Individuals are members of the society, and their actions affect the society, favourably or adversely. Economics carefully studies these individual actions which are injurious to the society as a whole and recommends the methods of their prevention. The problem of luxury is an example of this nature. Similar is the case with drinking. If a man is a habitual drunkard, he not only spoils his own health and reduces his own efficiency, but he also passes on this evil to others. Economics, by its salutary recommendations for preventing this injurious habit, does immense good to the society.

There are, then, certain economic issues which are of direct interest to society. The problems of free trade *vs.* protection, incidence of taxation, gold exports, development of cottage industries and the like, affect the society as a whole. Economics carefully studies these problems in the light of social welfare and gives its unbiased opinion. Since the most notable trend of modern politics has become the suppression of the Individual by the State, this being the keynote of Socialism, Fascism and Planned Capitalistic Economy, socio-economic problems are fast increasing in number and urgency.

These are, indeed, some very important social problems to which Economics has to address itself. Of all such problems, the problem of poverty is the most stupendous and the most weighty. "The conditions which surround extreme poverty, especially in densely crowded



places, tend to deaden the higher faculties. Those who have been called the residuum of our large towns have little opportunity for friendship ; they know nothing of the decencies and the quiet, and very little even of the unity of family life ; and religion often fails to reach them.... And in addition to the residuum, there are vast numbers of people both in town and country who are brought up with insufficient food, clothing, and house-room, whose education is broken off early in order that they may go to work for wages ; who thenceforth are engaged during long hours in exhausting toil with imperfectly nourished bodies, and have, therefore, no chance of developing their higher mental faculties.... Their poverty is a great and almost unmixed evil to them. Even when they are well, their weariness often amounts to pain, while their pleasures are few ; and when sickness comes, the suffering caused by poverty increases tenfold".<sup>4</sup> It is broadly true that "the destruction of the poor is their poverty". Economics by studying the causes of poverty and suggesting methods of their removal, does real service to a large part of mankind.

### INTERMEDIATE QUESTIONS

1. What is the practical value of the study of Economics ? Do you consider that Economics should be one of the compulsory subjects for a University course of study in India ? (Andhra, I. A., 1944).
2. Discuss the subject-matter of Economics and write a note on the importance of the study of Economics with special reference to Indian conditions. (Madhya Bharat, I. A., 1952).
3. State your views regarding the importance of the study of Economics. (Osmania, I. A., 1950).
4. Outline clearly the scope of Economics and discuss the value of the study of economic theory. (Punjab, Inter., 1950).
5. Why is Economics becoming such a popular subject of study ? (Punjab, Inter., 1949).
6. What is the subject-matter of Economics ? Discuss the practical utility of the study of Economics, giving Indian examples. (Raj., I. A., 1952).
7. Describe briefly the practical advantages of the study of Economics. How does it help us in improving conditions of life in a village ? (Raj., I. Com., 1950).

<sup>4</sup> Marshall, *Principles of Economics*, pp. 2-3.

## CHAPTER 8

### SOME BASIC TERMS

In common use almost every word has many shades of meaning, and therefore needs to be interpreted by the context. And, as Bagehot has pointed out, even the most formal writers on economic science are compelled to follow the course; for otherwise they would not have enough words at their disposal.—*Marshall*.

Every branch of study has some basic terms which are used in certain definite senses and which require explanation. Economics also has its basic terms. They will be defined and explained in their appropriate places. Here we shall explain the following five terms only Utility, Value, Price, Goods and Wealth.

#### § 1. UTILITY, VALUE AND PRICE

##### Utility

*Definition.* If we look to our belongings, we will find that all the things we possess satisfy some want or the other. If they did not have this attribute, we will not care to possess them. *The capacity of a commodity to satisfy human want or wants, is known as its utility.* Pencils and cigarettes, books and newspapers, intoxicating liquors and drugs, *charas* and *bhang*, chairs and tables, all satisfy human wants and have utility.

*Usefulness and Utility.* Sometimes the above statement arouses a question from the reader: How can such useless and harmful things as intoxicating liquors and drugs, *bhang* and cigarettes, have any utility. The objection is the result of a confusion between *utility* and *usefulness*. Utility has nothing to do with usefulness or otherwise. Utility is simply the capacity of a commodity to satisfy *some* human want, good or bad. The satisfaction of that want may produce good result or cause injury; that is not a material point at all. An intoxicant satisfies a harmful want; while a medicine satisfies a useful want. But since each of them does satisfy some human want, it possesses utility. An article "may give pleasure or it may prevent pain; it may satisfy hunger or thirst or merely man's desire to have pleasing articles around him in his home; it may make its possessor neat and clean or it may render him drunk or helpless. So long as it ministers to some desire of mind or body, it possesses utility in the economic sense, although the object of desire may be pernicious in its effect on the possessor or on others, or detrimental to the community generally".<sup>1</sup>

*The Degree of Utility depends upon Urgency of Want.* Utility then, is the *want-satisfying power* of an article; and whether the utility of an article is great or small, depends upon the greater or less urgency of the want it satisfies. Suppose a man crossing a desert is very thirsty,

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1 S. E. Thomas, *Elements of Economics*.



so much so that unless he gets a cup of water he would die. The intensity of his want for water in this case is very great, and, therefore, the utility of water is correspondingly considerable. But suppose our friend, the traveller, is not in a desert but is in his own comfortable house and is feeling slightly thirsty ; his want for water is not urgent in this case and, therefore, its utility to him will be little. This example also illustrates the fact that the utility of an article is variable and not fixed.

*Utility depends upon Consumer's Want.* Utility, it should be remembered, is not inherent in a commodity. It is, on the other hand, the relationship existing between the consumer and the commodity. In the above example water remains the same in both the places, the desert and the house ; but its utility is great in the one case and very small in the other. Why ? Because the relationship between the consumer and the water is different in the two cases. Again, take the case of sand. When lying in a desert, it has no utility ; but when brought to the plains to be used in the construction of buildings, it comes to possess utility. The inherent characteristics and composition of sand do not change ; but still it does or does not have utility according to external circumstances. It follows, therefore, that utility does not depend upon the internal characteristics of an article but on the external circumstances—the relation between the consumer and the article in question.

## Value

*Definition.* Value is the power of a commodity to command other commodities in its exchange<sup>2</sup>. Briefly, value is power of exchange. You can exchange a rupee coin for pens or pencils or fruits ; and all these can be exchanged for money. They all possess value. But sun's rays cannot be exchanged for anything since they are plentiful and free. As such, they do not have any value.

*Value depends upon External Circumstances.* Value of an article is measured by the articles which can be had in exchange for it. For instance, if one *tola* of gold exchanges for 50 *tolas* of silver, gold is 50 times as *valuable* as silver, or the value of silver is 1/50th of that of gold. Value expresses the relationship between two commodities, and depends, like utility, upon external circumstances. The value of an article is not determined by its intrinsic characteristics.

An article possessing utility may or may not possess value. For instance, sun's rays, moonshine and rain water possess immense utility but they are so abundant and free that nobody has to pay anything for them. As such, they have no value. But no article can have value unless it has utility ; for nobody will like to pay anything in exchange

2 Value of a thing simply means the quantity of some other thing for which it is exchanged. Thus value is a relative term, and implies that one thing is compared to another. If there were one thing in the world, the idea of value could not exist because no exchange could be possible. Moreland, *Op. Cit.*, pp. 15-16.



for a commodity which cannot satisfy any of his wants and is, therefore, absolutely useless.<sup>3</sup>

## Price

We have defined value as the capacity of a commodity to command other commodities in its exchange. The practice of exchanging one article for another article is known as *barter*, which has now become almost a thing of the past. Today most of the articles are exchanged for money. *The amount of money for which an article exchanges is known as its price.* In other words, value expressed in terms of money is known as price. As Moreland observes, 'Price is simply a short way of expressing the value of a thing in terms of money'; to say 'the price of *ghee* is one seer per rupee', is precisely the same as to say 'the value of one seer of *ghee* is one rupee'.<sup>4</sup>

## § 2. GOODS

### Meaning

If you just look around you, you will find yourself surrounded with a large number of things which satisfy your some desire or the other. The chair on which you sit, the table on which you keep your books, the shoes that you wear, the cigarette that you smoke and indeed even the sunshine, beautiful scenes, and pleasant evenings that you enjoy all satisfy your needs or desires. All these things, material or non-material, which satisfy the desires of human beings are called '*Goods*'.

In everyday life, the term *goods* is used in the sense of *material possessions* of a man. But the word is also sometimes used in a broader sense as when we say it is a great good to a man to be able to find recreation in reading or music after his day's hard work is done. It is in this, the broader sense, that economists use the term *goods*.

Marshall defines *goods* as all those things that satisfy human wants. In other words, anything possessing utility is a 'good'. Goods include not only material and tangible things like books, pencils, food

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<sup>3</sup> *Value-in-use and Value-in-exchange.* Some economists use the word 'value' in a slightly different sense. According to them value is divisible into (1) value-in-use and (2) value-in-exchange. Value-in-use is said to convey the same sense which utility does; in other words, it means the capacity of a commodity to satisfy some human want. Value-in-exchange, on the other hand, is said to convey the sense which the term value does in the above classification; in other words, it means the capacity of a commodity to command other commodities in its exchange.

The use of the terms value-in-use and value-in-exchange has been, largely given up by modern economists. They use the terms *utility* and *value* respectively instead. Students should, therefore, remember that when the word value is used without any addition to it, it signifies *value-in-exchange*.

"The word *value*," Adam Smith wrote, "has two different meanings, and sometimes express the utility of some particular object and sometimes the power of purchasing other goods which the possession of that object conveys." But, says Marshall, experience has shown that it is not well to use the word in the former sense. See Marshall, *Economics of Industry*, p. 39.

<sup>4</sup> Moreland, *Op. Cit.*, p. 16.



and buildings but also non-material and intangible things like love, affection and friendship.<sup>5</sup>

“Goods” therefore, is a wide term. Their essential nature can be made clearer by studying their various classes. Goods can be classified (i) according to their material or non-material nature, (ii) according to their transferability or non-transferability. and (iii) according to their being free or appropriated.

### **Material and Non-Material Goods**

Goods may be *material* or *non-material* (i.e., personal). *Material goods* consist of useful material things and of all rights to hold or use or derive benefits from material things. They include physical gift of Nature, land and water, air and climate; the products of agriculture, mining, fishing and manufacture ; buildings, machinery and implements; mortgages and other bonds ; shares in companies, patent rights and copyrights. Material goods are all external and can be transferred from person to person.

*Non-material or personal goods* are those intangible goods which have reference to a particular *person*. They may be (i) internal or (ii) external. Personal qualities and faculties of a man such as business ability, professional skill or the faculty of deriving recreation from reading and music, all these lie within himself and are called internal. The second class of non-material goods are called external because they consist of relation with other people which are beneficial to him. The chief instance of such relations beneficial to their owner are to be found in the goodwill and business connection of traders and professional men.

### **Transferable and Non-transferable Goods**

Another point of view from which goods can be classified is their transferable or non-transferable character. Transferable goods are those goods whose ownership can be transferred or changed. Books, pencils, buildings, goodwill and the numerous other commodities of trade can be sold and belong to this class. Transferable things are not necessarily transportable; for instance, a house is transferable but not transportable. There are, however, certain desirable things which cannot be transferred. Among the non-transferable goods are to be included a person's qualities and faculties for recreation and enjoyment (i.e., his internal goods); also such of his business connections as depend upon personal trust in him and cannot be transferred; also the advantages of climate, light, air, etc.

### **Marshall's Classification of Goods**

The classification of goods from the point of view of material

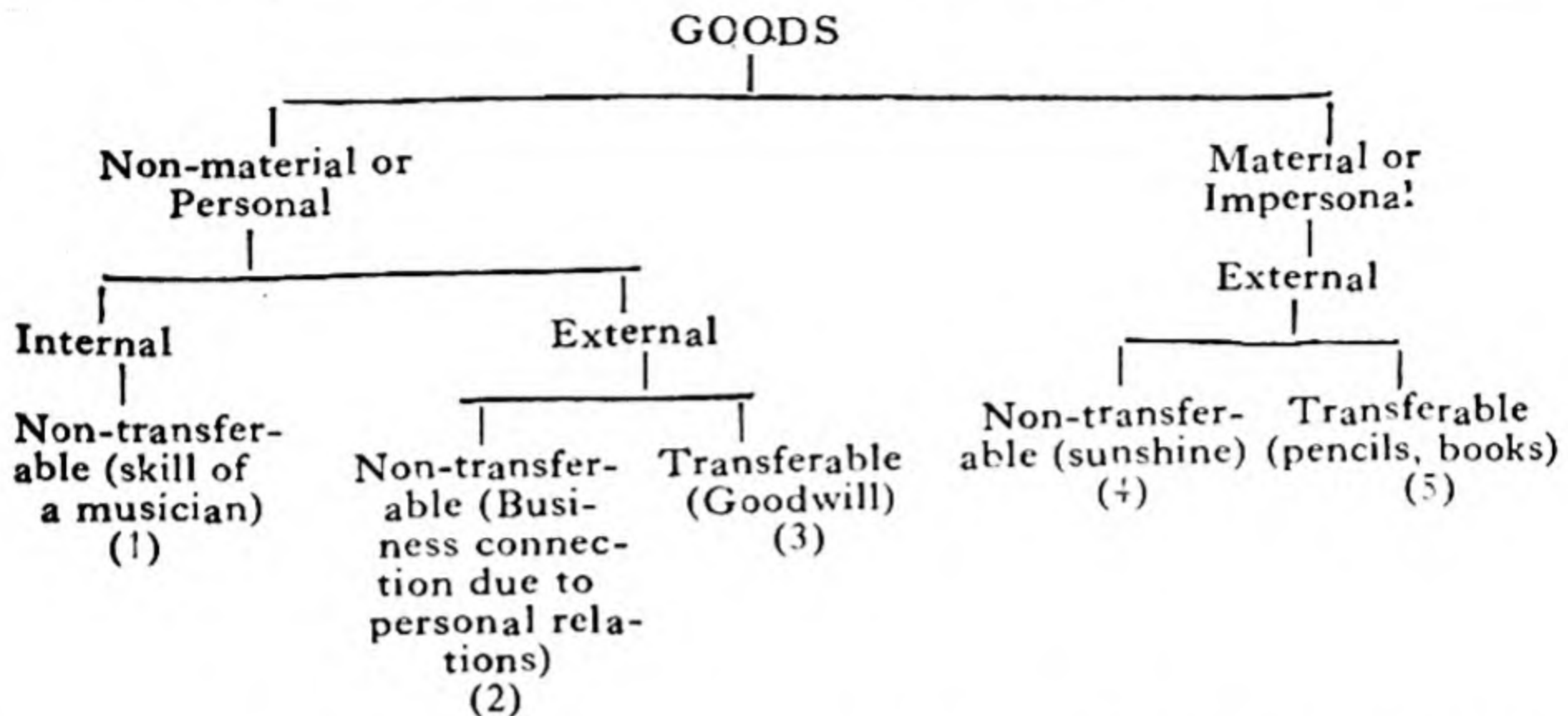
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5 Prof. Pierson observes, “Whether we can regard things as representing goods for us or not depends not only upon their own qualities, but also upon the extent of our knowledge, the state of civilisation to which we have attained, the climate in which we live, our trades or occupations, the peculiarities of our tastes and even upon our age or the ages of those for whom we have to provide.—Pierson, *Op. Cit.*, p. 47.

6 Marshall, *Principles of Economics*, pp. 54, 55.



and non-material nature and their transferable and non-transferable character may be conveniently combined into one. Marshall has given the following classification from this point of view :



(It should be noted that material goods are always external; personal internal goods are absolutely non-transferable).

### Consumption and Production Goods

Goods which are consumed for the direct satisfaction of human wants are called consumption goods. The food we eat and the clothes we wear, the books we read and the house we live in, all are consumption goods. The goods which are used for further production of wealth are known as production goods. They produce things which may be used for consumption later; thus they satisfy human wants indirectly. The seeds sown in the field and the raw materials used in a factory are the examples of production goods.<sup>7</sup>

### Free (or Unappropriated) and Economic (or Appropriated) Goods

Some goods are so plentiful that they can be obtained without any payment; that is, they are *free*. Water, sunshine, air and heat are some of the examples. Free goods are not the result of human effort or sacrifice. Nature provides them in plenty for the use of human beings. That is why they are also called 'gratuitous goods' or 'natural goods'. Free goods are unappropriated in the sense that they are not the private property of (or they do not belong to) any particular individual or individuals. Such goods have utility but not value.

There are, however, other goods which are limited in supply and which can be obtained only on payment. Books, pencils, houses, clothes and cycles are all economic goods. All the goods that are

<sup>7</sup> Goods may be divided into (1) those which are wanted for themselves and so yield utility directly and (2) those which are not wanted for themselves and so yield utility only indirectly. Of the first class are clothes, furniture, food, and so forth. Of the second class are machines, factories and all instrumental goods as they may be called. The goods of the second class (indirect goods) derive their utility from the utility of the goods of the first class (direct goods) which they aid us in procuring.—Chapman, *Elements of Economics*, p. 5.



bought and sold come under this class. They are the results of human effort or sacrifice and are not the free gifts of Nature. Economic goods are appropriated goods in the sense that they belong to certain individual. Such goods possess utility as well as value. Economics is concerned with economic goods and not with free goods.

The land in its original state was a free gift of Nature. But in old and thickly populated countries of today, it has ceased to be a free good. Wood is still free in some Brazilian forests. The fish of the sea are generally free though some sea fisheries are jealously guarded for the exclusive use of the members of a particular nation. But wheat grown on free land and fish that have been acquired from free fisheries are not free, for they have been acquired by labour and are consequently sold for money.

### § 3. WEALTH

#### Meaning

*Wealth may be briefly defined as consisting of all the goods that have value.*<sup>8</sup> Since such goods are known as economic goods, 'wealth' and 'economic goods' have the same meaning. All the commodities which are bought and sold are wealth; those articles which are not bought and sold are definitely excluded from the category of wealth, though they might possess immense utility. Air, light and heat have considerable utility; but since they have no value and are not bought and sold; they are not wealth.<sup>9</sup> Wealth consists of all those articles which are exchangeable.

#### Characteristics of Wealth

An article can have value and be called wealth only if it possesses three principal attributes, namely, utility, appropriability and scarcity.

(1) *Utility.* An article can have value only if it is capable of satisfying some human want, *i.e.*, if it has utility. If a commodity cannot satisfy any want whatsoever of an individual, he will not care to spend money for acquiring it. In other words, it will have no value. Without utility, no article can become wealth.

(2) *Appropriability or Transferability.* In order to be classed as wealth an article must be appropriable, that is, it must be capable of being made the property of somebody. That no nobody will spend money or do some sacrifice for the acquisition of an object which he cannot call his own, is simple commonsense. Appropriability, as such, is an essential attribute of wealth. It implies transferability. Only transferable goods can have value and can become wealth. No man will care to pay a price for the moon, sun and stars since they cannot be transferred to him. Things like air and sunshine possess great utility and yet are not counted as wealth. They fail in the second point of

8 If an article possesses only utility, it is called a good. If it also possesses value it is called *economic good or wealth*.

9 The term 'wealth' is made to mean different things by different economists. For an interesting account, see J. K. Mehta, *Groundwork of Economics*, Ch. 1.



definition : they are supplied freely by nature to each and all and are not capable of being appropriated and exchanged.<sup>10</sup>

(3) *Scarcity*. No article can have value unless it is limited in quantity, i.e., it is scarce. Scarcity signifies the excess of demand over supply. If a thing is so plentiful that its supply exceeds the demand for it, it can be obtained without any payment : it will have no value and will not be classed as wealth.

*To sum up, an article can have value only if it has utility, is scarce and can be appropriated. Because wealth consists of those goods which have value, therefore utility, scarcity and appropriability may well be called attributes of wealth.*<sup>11</sup>

### Marshall's Conception of Wealth

According to Marshall, wealth consists of two classes of goods :

(1) Those *material goods* to which a person has private rights of property and which are, therefore, transferable and exchangeable. These, it will be remembered, will include not only such things as land and houses, furniture and machinery, but also shares in companies, debentures, etc.

(2) Those *immaterial goods* which belong to him, are external to him and serve directly as the means of enabling him to acquire material goods. Thus it excludes all personal qualities and faculties, even those which enable him to earn his living ; because they are internal. Wealth is thus used in the sense of economic goods.

It you turn to the chart given on page 53 above, you will find that only third and fifth classes of goods come under *wealth*.

### Ruskin's View

Ruskin was a valiant critic of the material nature of Economics as was the case in his times. The material definition of wealth, namely, that it consists of all the desirable things that have value, did not agree with him. According to him, "There is no wealth but life including all its powers of love, of joy and admiration". Happiness, capacity to love and ability to admire things of art, were in his opinion, real wealth.

Let us examine Ruskin's contention. The qualities mentioned by him are certainly desirable ; hence they are *goods*. But since they have no value, though they have a high degree of utility they cannot be regarded as *economic goods or wealth*. As such, the use of the word *wealth* in the above quotation is wrong.

<sup>10</sup> A Hall, *Elements of Political Economy*, p. 3.

<sup>11</sup> Wealth should be distinguished from *Capital* and *Income*. Capital is that part of wealth which is used for further production. Income is periodical flow from capital. "The capital of an individual or a community is an amount of wealth in existence at a particular moment. The income of an individual or a community is an amount of wealth obtained during a specified period. Capital is being constantly converted into income and income into capital, but capital under all times and conditions is measured as a quantity while income is more properly measured as a rate. Capital is a static conception independent of time ; income is a dynamic conception involving time element."



What Ruskin really meant was that economists should change their definition of wealth so as to include in it the qualities mentioned by him. But we cannot do this since these qualities cannot be measured by the measuring-rod of economists, namely, money; and what cannot be thus measured, has per force to be excluded from our scope.

However, the nature of Economics has much changed since Ruskin wrote. Welfare, normative concepts, ethical problems and other like topics are now discussed by economists. Had Ruskin been alive today, he would not have probably made this criticism, at least not so bitterly.

### Classification of Wealth

Wealth may be classified into (i) personal wealth, (ii) collective wealth, (iii) national wealth and (iv) international wealth.

(i) *Personal or Private Wealth.* Personal wealth is the wealth which belongs to a certain person. The above conception of wealth as given by Marshall is that of personal wealth: it includes those economic goods which belong to him and which he can sell. Associations of persons, companies and clubs, etc., are usually counted as individuals and the wealth belonging to them as personal wealth<sup>12</sup>.

(ii) *Collective or Communal Wealth.* The wealth owned by Municipal Boards or State and Central Governments is known as collective or communal or social wealth. Public libraries, public parks, roads and harbours are good examples of collective wealth. Municipal and Government bodies represent the *community* and the wealth owned by them may be regarded as wealth collectively owned by the citizens; hence the name *Communal or Collective Wealth*.

(iii) *National Wealth.* The term *national wealth* is still wider and includes the following items :

- (1) *Personal Wealth* of all the members of the nation ;
- (2) *Collective wealth* of the nation ;
- (3) *Natural advantages* possessed by a country, e.g., climate geographical position and mineral resources; and
- (4) *Non-material elements* like characteristics of the members of the nation, and goodwill and reputation of the country.

Students may raise an objection : How can natural advantages and non-material elements (in 3 and 4 above) be regarded as wealth, since they cannot be bought and sold ? This objection is plausible, but it can be met by suggesting that the term wealth is used here in a broad sense.

(iv) *Cosmopolitan or International Wealth.* Cosmopolitan wealth includes the wealth belonging to all the nations of the world plus wealth shared by all of them in common, as for example, oceans, scientific knowledge, mechanical inventions, etc.

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<sup>12</sup>The debts which an individual owes to others may be regarded as his *negative wealth* and they must be subtracted from his gross possessions to arrive at his true *net wealth*.

The following diagram illustrates the above classification of wealth:

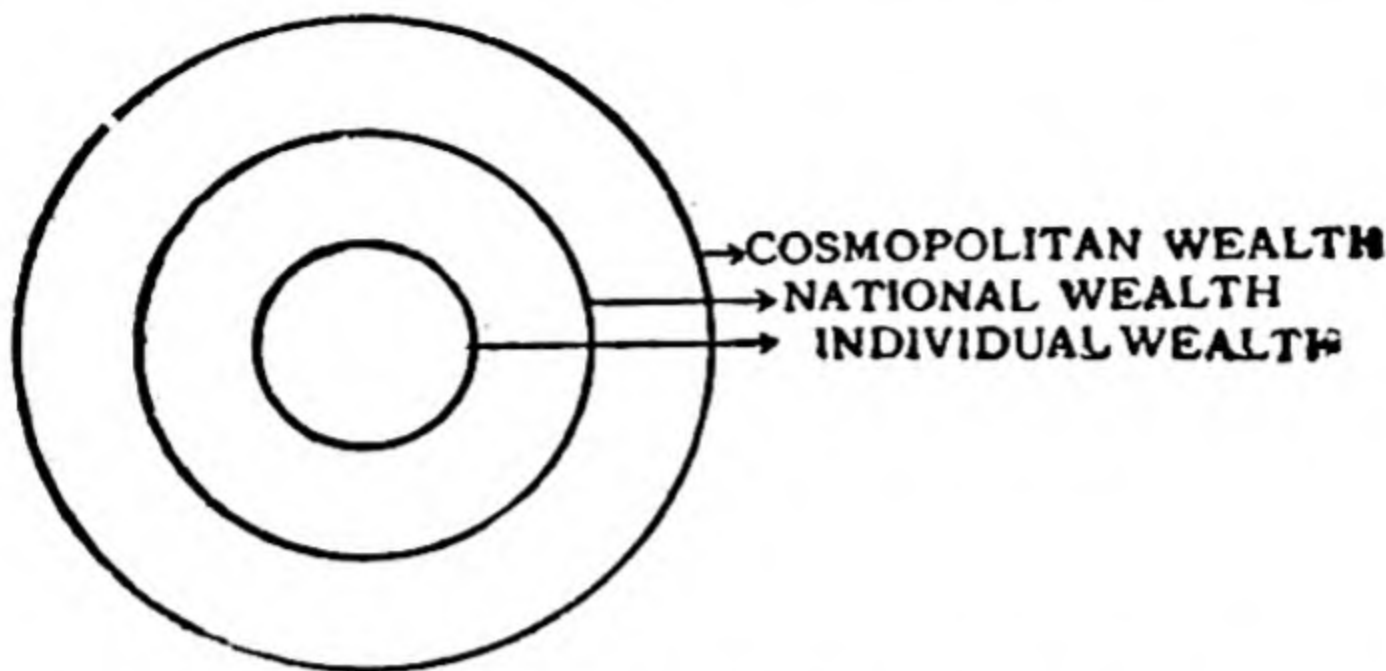


Fig. 7. Explaining the classification of wealth

(Note : National wealth includes individual wealth and collective wealth).

### Some Examples

**Personal Skill.** Personal skill should or should not be regarded as wealth, is a question which very often confuses students. Let us take the case of a surgeon's skill and decide whether it should be counted as wealth of the surgeon or not. Now, this skill is *not transferable*, although the service which it can render is, of course, transferable. Hence this *personal skill is not wealth*, though the service it gives rise to is wealth. Everybody attaches great value to sunshine; but still sunshine does not possess value in an economic sense—it cannot be bought and sold, and consequently it is not called wealth. The same reasoning applies to personal skill.

But the surgeon himself attaches high value to it, and may, in fact, guard against its loss by insuring his hands or eye-sight. Such skill is, therefore, regarded by some economists as *personal wealth*. But, strictly speaking, this reasoning is fallacious.

Similar reasoning applies to the skill of an engineer, the melodious voice of a songstress, the strength of a wrestler and the nimble fingers of an embroidery worker.<sup>13</sup>

(b) *Natural resources of a country* are not personal wealth; but they are included in the natural wealth of the country concerned. We have explained this point above.

(c) *B.A. Degree.* This has utility, and it is also scarce. But it is not transferable. If an individual purchases the B. A. degree of another individual, he will not become a graduate himself.

(d) *Copyright.* If an author writes a book, he acquires copyright in it, *i.e.*, he gets sole right to print its copies. This right has utility, is scarce and can be sold away. Hence it is wealth.

<sup>13</sup> "The term 'Personal Wealth' has been applied to distinguish this but although clearly a point to be noted, yet the use of the word wealth without an adjective to qualify it is generally held to include only those things external to the individual and to exclude his personal energies and abilities."—Hall, *Elements of Political Economy*.



## INTERMEDIATE QUESTIONS

1. What is wealth ? Examine its characteristics. What is meant by the statement that wealth consists of goods which possess exchange value ? (Andhra, I. A., 1950).
2. Distinguish between individual and national wealth, giving illustrations. How will you treat private and public debts in their groups ? (Andhra, I. A., 1954).
3. Write a note on utility and value. (Bombay, I. Com., 1940).
4. Are the following wealth or not : (i) Love of a mother for her child, (ii) Good health, (iii) Money, (iv) The Indus, (v) Goodwill of a business, (vi) Air, (vii) Professional services ? Give reasons for your answer. (Karachi, I. A., 1952).
5. Define wealth. Explain with reasons if the following are wealth or not : (a) Copyright of a book, (b) B.A. degree, (c) Voice of a singer, (d) the Indian Ocean. (Madhya Bharat, I. A., 1953).
6. What is wealth ? Give examples of the different kinds of wealth. (Osmania, I. A., 1952).
7. Distinguish between wealth and utility. Illustrate your answer. (Osmania, I. A., 1951).
8. What are the fundamental characteristics of wealth ? What is meant by the statement that wealth consists of goods which possess exchange value ? (Osmania, I. Com., 1952).
9. Define wealth. What does an individual's wealth consist in ? Will you include a man's skill or his sense of duty in the list of his wealth ? Give reasons. (Punjab, I. A., 1944).
10. What do you mean by wealth ? Describe the qualities which a thing must have to be called wealth. (Patna, I. A., 1951).

## CHAPTER 9

### DEVELOPMENT OF ECONOMIC ACTIVITIES

Wants—efforts—satisfaction—this is the circle of Political Economy.—*Bastiat.*

We shall now study the various ways in which men, from earliest times to the present, have been earning their living. In other words, we shall discuss the development of economic life.

#### § 1. DEVELOPMENT OF ECONOMIC LIFE

Since his earliest abode on this planet, man has made tremendous progress. This development has taken place in all walks of life—social, political, economic, ethical and others. Here we are concerned with the economic development only. Economic progress of human beings has, indeed, been remarkable. The original man used to remain naked, sometimes covering his person with bark and leaves of trees or skins of animals ; and to eat wild fruits and flesh of animals. The average man of today is a completely changed being ; his wants have multiplied and the satisfaction of these wants has become an extremely complicated process. He keeps his body covered with cloth from Manchester and silk from Tokyo ; eats Chinese soya beans and Mediterranean oranges ; and drinks American syrups and French champagne. The economic progress of humanity has been profound.

#### Confusion of Thought

Confusion of thought and indefiniteness are sometimes allowed to creep in outlining the development of economic life. Some economists discuss here the evolution of economic activities, while others outline the occupational stages through which society has passed. Some writers completely ignore the economic aspect of development of the entire social organization. Quite often the differences between them are not clearly comprehended nor is the relationship existing between them established.

#### Our View

In our opinion development of economic life can be studied from the following three points of view :

- (1) *Development of Economic Activities.* Here we show that economic activities which were formerly very direct and easy have now become very indirect and complex.
- (2) *Occupational Development.* Here we explain how the relative importance of different occupations has undergone a change as economic progress has been made.
- (3) *Development of Economy.* As society made economic progress, her economic organization also underwent changes. The historical order of these economies is as under : Feudalism, Capitalism and Socialism.



*Differences in These Viewpoints.* (1) In our study of the *development of economic activities* we assume the point of view of an individual, and explain the various changes that have taken place in the activities that he does to satisfy his wants. (2) In our study of *occupational development*, we take a somewhat wider point of view, because here we try to understand from the social point of view how the relative importance of different occupations has undergone a change. (3) In our study of the development of economic system, we adopt a still wider point of view, because here we take into account the whole of the economic organization of society and trace its historical evolution.

## § 2. DEVELOPMENT OF ECONOMIC ACTIVITIES

The feeling of wants which press for satisfaction leads man to make economic efforts. These efforts result in the satisfaction of his wants, directly or indirectly. Wants, efforts and satisfaction—these are, then, the important links in the chain of economic activities. The relation between wants, efforts and satisfaction was direct, simple and uninterrupted during the infancy of society. The economic chain then had only these three links and no more. But the progress of society has lengthened the process of satisfaction of wants, and at the present time many more links have been added to the economic chain.

### 1. The Stage of Direct Efforts

In the earliest stage of history, the relationship between wants, efforts and satisfaction was very intimate and direct. As soon as a want was felt, effort was made to satisfy it, and the satisfaction was obtained. When the savage felt hungry, he plucked some wild fruits, and ate them up. If he wanted a shelter, he collected twigs of trees, and prepared a crude shelter. This was the first stage of economic life and is called the *Stage of Direct Efforts*. In all the subsequent stages, the relationship between wants, efforts and satisfaction became *indirect*. The following diagram illustrates the essentials of the first stage :

#### STAGE I

*Wants—Efforts—Satisfaction*

### 2. The Stage of Indirect Efforts

In the first stage of direct efforts, each man himself produced everything he wanted for his own consumption. This he could afford to do in the earlier days when wants were very few and simple and could be easily satisfied. With economic progress, however, wants multiplied and became complex. Man now discovered that he could not himself produce all the articles of his consumption efficiently. He could satisfy more wants if he (i) produced only one or a small number of articles which he could prepare most efficiently; and (ii) exchange whatever he produced (keeping with him so much as he required for his own use) with other things he required.

He was thus compelled, for reasons of advantage, to lengthen the chain of economic activities. Whenever the want for a particular thing was felt, effort was made to produce the articles for which the



person concerned had special proficiency ; and then the articles produced were exchanged for the objects of his desire. Thus *exchange intervened between efforts and satisfaction* ; in other words, a gulf was created between efforts and satisfaction which was bridged over by exchange. The relation between wants, efforts and satisfaction thus became indirect, as is shown below :

## STAGE II

*Exchange*

*Wants—Efforts*  *Satisfaction*

## 3. The Stage of Industrial Grouping

As human knowledge increased, people began to realize that they could increase their output still more and satisfy still more wants if, instead of working individually, they worked jointly in groups. In other words, they began to appreciate the advantages of co-operation and association, which they soon put into practice.



An example will make the new improvement effected under this stage clear. Suppose a man wants a chair. In the first stage of direct efforts, he will prepare it himself. In the second stage of indirect efforts, it will be prepared by the carpenter ; and the man, who wants it, will get it from him in exchange for some other thing, say, cloth, which he (the consumer) has produced. In the third stage of industrial grouping, the chair will be prepared not by one man but by a number of men working in a group. Thus one man may fell trees ; another may bring them to the place of work ; a third may cut them into planks ; a fourth may make a chair out of the planks ; and a fifth may varnish it and give it the finishing touch. Five persons working jointly prepare the chair.

The above example of the preparation of chair in the third stage raises an important question : When five persons prepare a chair, to whom does it belong ? Naturally, it belongs to all of them. And whatever they get by bartering it, is distributed among them equitably. The share of each individual enables him to satisfy his own wants.

In the third stage, then, the feeling of wants leads to efforts which are combined and joint. Combined efforts bring the satisfaction of the group through exchange. The individual member of the group obtains satisfaction through the distribution of the earning of the group. The following diagram makes it clear.

## STAGE III

*Exchange*      *Distribution*

*Wants* ——— *Efforts*  *Satisfaction*  *Satisfaction*  
of an      as a mem-      of wants      of wants of  
indivi-      ber of a      of group.      individual  
dual.      group.           members.



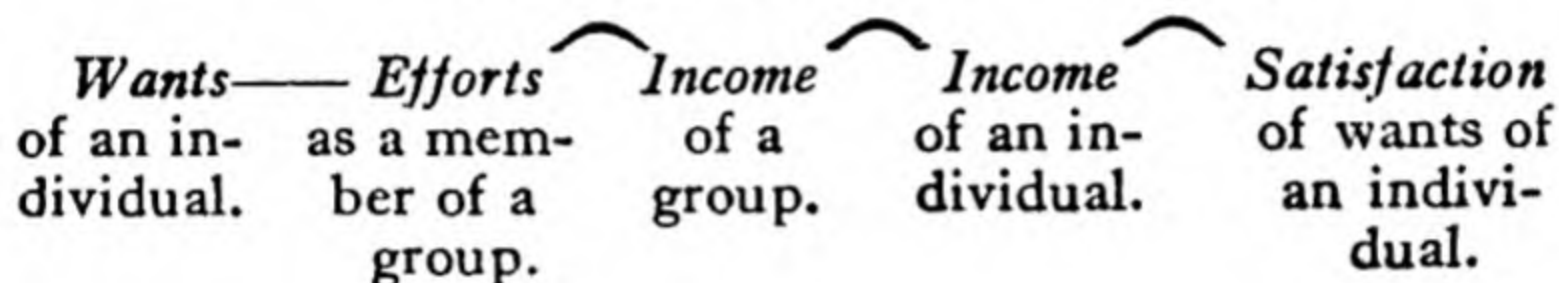
#### 4. The Stage of the Use of Money

Hitherto exchange took the form of barter. Articles were exchanged for articles ; money had not yet come into use. But the barter system had several difficulties, to solve which money was introduced.

The introduction of money all the more lengthened the chain of wants, efforts and satisfaction. Whatever was produced under co-operative production, began to be sold for money and the group now obtained a certain money income., The income of the group began to be distributed among the individuals composing the group, thus resulting in the obtainment of individual's incomes. With this income each individual could purchase the article or articles he required and obtain satisfaction. This is the present stage of economic evolution and is illustrated below :

#### STAGE IV

#### *Exchange   Distribution   Exchange*



#### INTERMEDIATE QUESTIONS

1. How are economic wants satisfied ? (Sagar, I. Com., 1952)
2. "Wants..Efforts..Satisfaction. This is the circle of Economics." Bastiat). Give your opinion on this statement. (Raj., I. A., 1950).
3. Write a short account of the evolution of economic life. (Delhi, Higher Secondary, 1955).

## CHAPTER 10

### OCCUPATIONAL DEVELOPMENT OF SOCIETY

The above is the history of economic activities of the individual. Now we shall describe the various stages through which the economic organization of society has passed since the earliest times. They are : (i) the hunting and fishing stage ; (ii) the pastoral stage ; (iii) the agricultural stage ; (iv) the handicrafts or commercial stage ; and (v) the industrial stage.

#### 1. The Hunting and Fishing Stage

In early times, men used to support their lives by hunting and fishing. In this stage the wants of human beings were very limited and could be easily satisfied. For instance, when a man felt hungry, he just plucked some wild fruits and leaves or went a-fishing. If he wanted something to cover his person, he made use of barks of trees or skins of animals. If he wanted a shelter, a cave or a dense tree served the purpose. *Man depended for the satisfaction of his wants on what he found ; he did not make anything.* Wants were few and simple and they were satisfied in simple ways.

*Of all the wants, that for food was the most difficult to be satisfied, and shaped the economic life as a whole.* The plucking of fruits and plants was an easy task, but when it was necessary to kill animals with rough instruments, much exertion and skill were required. There were, then, times when fruits and plants did not grow due to famine or some other reason, and animals became scarce due to fatal diseases or due to their fight in large numbers when being chased by hunters. When animals moved to some new tract, men had to follow them. *Population was, therefore, migratory and sparse.* On an average a man required 70 to 80 sq. miles of land to maintain himself. Very often fresh tract would be obtained only by dispossessing others ; and this would necessitate *wars which were common in those days.* The vanquished were killed and their flesh was eaten by the conquered with pleasure. Prisoners could not be allowed to live since they could not be easily fed. Hence cannibalism, *i.e., the practice of eating human flesh was prevalent.* It should, however, be noted that fishing tribes were more peaceful than hunting tribes. They did not move from place to place very frequently for fish increase in number so rapidly that they remain plentiful in spite of being caught. The population was, therefore, dense and fixed.

The principle of private property had not yet made its appearance. By private property is meant the ownership of property by private individuals in the hunting and fishing stage, nobody possessed anything ; whatever was required was no sooner obtained than it was consumed. Each individual was self-sufficient, and exchange had not yet originated.

#### 2. The Pastoral or Nomadic Stage

The next stage of economic evolution is known as the pastoral



stage. *Animals were the centre around which the economic life was built in those days.* Increase in human intelligence had led to the

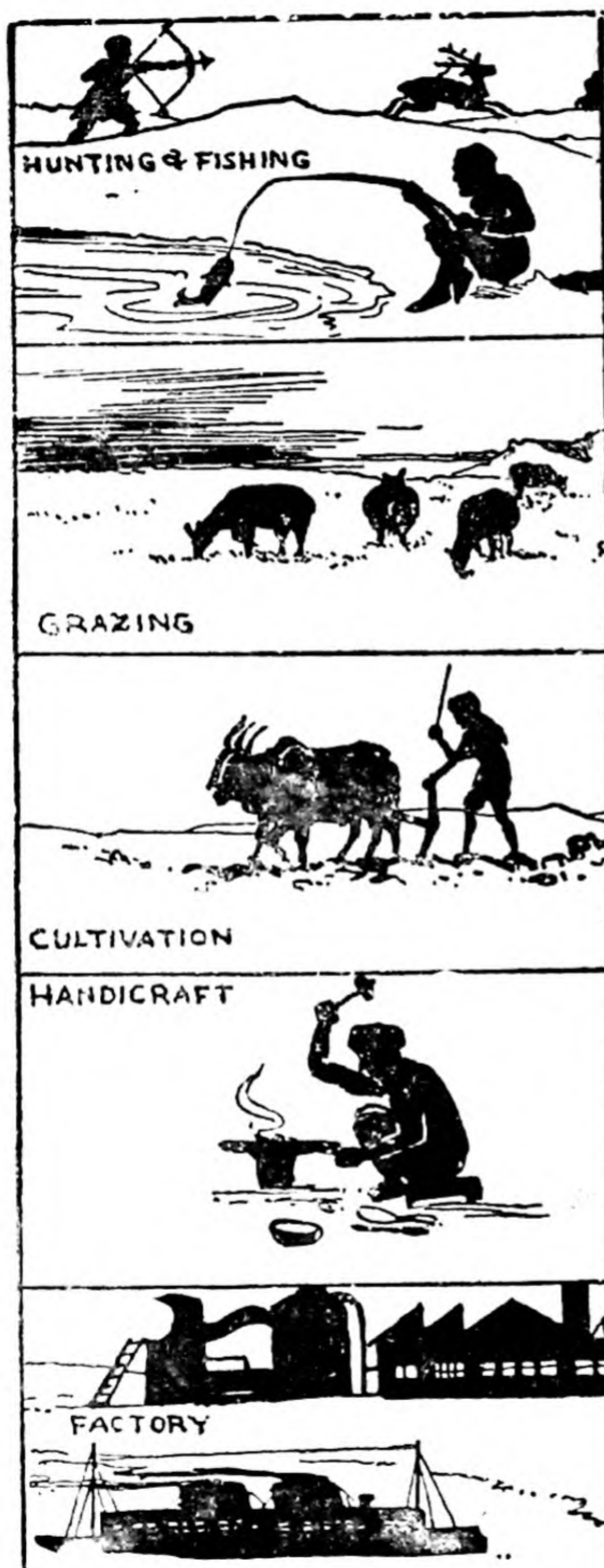


Fig. 8. Explaining the evolution of the economic organization of society.

realisation of the value of animals. They provided milk and wool; they ensured a regular supply of meat; they could also be used for riding purposes. Men, therefore, began to tame useful animals instead of killing them. The supply of milk, etc., imparted an element of stability and fixity in their hitherto precarious existence.

Animals live on grass which grows on pasture lands. The domestication of animals, is, therefore, closely related to the availability of pasture-lands. And the discovery of fresh grazing grounds for animals was an important problem which the people of the pastoral stage had to tackle. As soon as one grazing ground ceased to be useful they migrated along with their animals to newer areas. *Men thus used to wander from place to place* not for their own food but for the food of their cattle. When green grasslands were found, men used to live in *fixed abodes temporarily*. Since food supply was greater in this stage than in the preceding one, the *population also tended to be denser*. The necessity of fresh grazing grounds was a fruitful source of wars. But the practice of killing war prisoners was given up in this stage for they could be better utilised as slaves



for looking after animals and for other rough work. *The system of slavery had its origin in these days.*

The greater stability and increase in the food supply and the practice of keeping slaves resulted in some leisure which men utilised in doing finer and better things. Instruments and implements began to be made, and better houses began to be constructed. *Economic progress had its beginning in these conditions.*

*Private property also made its appearance now.* Animals were owned personally and were given personal supervision. But private property was not yet extended to land. Self-sufficiency continued to be the keynote of economic life and exchange did not yet appear.

### 3. The Agricultural Stage

So far man's existence was precarious, and he was on the lookout of a dependable source of food supply. An increase in his knowledge and his growing control over Nature led him to hit upon agriculture or the tillage of soil as a solution. This was the next stage in the economic evolution of society.

The cultivation of land required people to live in fixed abodes and at a particular place. *The migratory character of population was weakened.* Moreover, people began to live together as far as possible with a view to ensure safety; while increase in production could support dense population. These facts gave rise to *corporate living*, to hamlets and villages.

Man had hitherto controlled only animate nature ; now he began to control even inanimate nature. His productive capacity increased, life became stable and he began to have more leisure. *Ideal conditions for economic progress were thus created.*

Slaves were very helpful in agricultural organisation for all the rough, heavy and exhaustive work could be thrown upon them. *The system of slavery was, therefore, strengthened in this stage. So was the system of private property.* Land became a very useful thing and was found limited in supply ; the principle of private property was readily extended to it.

*Warfare continued* even in this stage. Whenever crops failed or animals died, or when more land or more slaves were needed, clan conflicts took place. Self-sufficiency and absence of commerce still largely remained the characteristics of economic life.

### 4. The Handicrafts Stage

With the passage of time, man's knowledge and the leisure at his disposal increased and *he began to manufacture small things* like knives, boats, etc. The number of occupations increased ; and *men began to specialize* in certain occupations. Some persons became carpenters, others blacksmiths, and still others agriculturists. Society was thus split up into a large number of occupations. The manufacturing occupations were known as handicrafts because most of the work was done by hand. Hence the name the Handicrafts Stage.

*Specialization brought exchange on the stage.* When men began



to specialize in one particular occupation, they produced only one or a few things, and it was necessary for them to exchange their surplus produce for other articles which they needed. Exchange or commerce became a necessary economic phenomenon and the trader was born.

In the beginning one *article* was exchanged for another *article*. In other words, *exchange took the shape of barter*.<sup>1</sup> But barter has several difficulties like the need of double coincidence of wants, absence of a measure of value, and others, which shall be discussed in detail under Exchange. These difficulties led to the invention of money, *after which exchange took the shape of purchase and sale*.

The first articles manufactured by men must have been weapons to kill animals and to fight. Later on useful articles like utensils, cloth, etc., would have been prepared. These things began to find markets slowly and gradually. As markets increased, merchants began to give raw materials to village artisans and get the articles prepared from them to order. The system is known as *domestic system of industry* and prevailed before the modern factory system.

### 3. The Industrial Stage

The pace of economic progress, however, continued ; and inventive genius of the human race brought *machinery on the stage*. The invention and use of machinery led to such a remarkable change in the economic conditions of society that an era of 'Industrial Revolution' was said to have set in. The Industrial Revolution first came in England and covered a century, from 1750 to 1850 roughly. From England it found its way to the other countries of the world. The machinery which were newly invented were costly and complicated and were driven by power, as for example, water, steam and electricity. It is this stage to which the society has reached today. So important is the part played by power—water, steam and electricity—in modern times that the present age is known as the Age of Power.<sup>2</sup>

The introduction of machinery resulted in very fundamental and far-reaching changes. Powerful and costly machinery have necessitated the working together of hundreds and thousands of workers under one roof. Machinery have increased output tremendously and have lowered the cost per unit thus driving the handicrafts out of the field. Big factories are to be seen everywhere these days. Big factories naturally lead to big towns. A factory is set up at a particular place usually because the latter has various industrial advantages like the availability of raw materials, labour, capital, etc. The establishment

1 Exchange of article for article is known as *barter*; exchange of an article for money, *sale* ; and exchange of money for an article, *purchase*.

2 We are not only using steam power and electricity but also water power far more efficiently than ever before chiefly to generate electricity. Perhaps wind power alone is used less than formerly, and we shall doubtless find ways to store up the force of the wind in the shape of electricity, too. We are using the direct rays of the sun and the force of tides, and proposals have been made to use the earth's internal heat. For this reason our modern economic stage is often called the "age of power."—B. G. Bhatnagar, *Outlines of Economics*, pp. 36-37.



of factory brings into prominence the industrial advantages of that place and other industries are also attracted thereto. After some time it grows into a big industrial centre. Many a silent hamlet has thus been converted into busy industrial cities ; and *big factories and big cities have become the most prominent features of the modern society.*

The introduction of costly machinery and the establishment of big factories have created a split in society. The *society has now been divided* into those who own such costly things, called capitalists ; and those who do not possess them and simply work in the factories for wages, called labourers. Capitalists and labourers are generally at daggers drawn. Labourers feel that it is they who work and produce things. But still they are given only a few annas daily while very large profits are pocketed by capitalists. As a matter of fact, these profits should be given to them because it is their labour which creates them. Capitalists, on the other hand, feel that they invest enormous capital in factories and it is only natural that they should get substantial reward therefor. This conflict often leads to "strikes" and "lockouts"<sup>3</sup> which are unwelcome interruptions in the otherwise smooth running of the economic mechanism.

Machinery has enabled man to control Nature and to harness her resources for productive purposes. *Production has, therefore, increased enormously.* It has been associated with a corresponding increase in trade and commerce which have become international. Trade is carried on with the help of certain auxiliaries like transport, banking and financial systems, all of which have been largely improved. Money economy has been replaced by credit economy to give sufficient scope for modern economic activities. In the modern industrial stage, manufacturing industries occupy a central place, trade and commerce are considered to be their auxiliaries, while agriculture is given a minor position, though the importance of agriculture has been increasing since the Second Great War.<sup>4</sup>

### INTERMEDIATE QUESTIONS

1. Write a short note on "Agricultural Stage." (U. P., I. A., 1953).
2. Describe the various stages of the evolution of economic life from early times to the present day, and discuss the chief features of each stage. (U. P., I. A., 1942).
3. Why is the population in Pastoral Stage denser than in Housing Stage and less dense than in Agricultural Stage ? (Raj., I. Com., 1945).
4. Outline the main stages of economic development and give the characteristics of each. (Punjab, I. Com., 1952).
4. Write a short account of the evolution of economic life. (Delih, Higher Secondary, 1955).

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3 When labourers refuse to work, a "strike" is said to have taken place; but when factory-owners close down the factories and refuse to give work to labourers, it is said to be a "lock-out."

4 For a detailed discussion, see my *Economic and Commercial Essays*.



## CHAPTER 11

### DEVELOPMENT OF ECONOMIC SYSTEMS

We have discussed in the preceding sections the changes in the nature of economic activities that have taken place thus far as also the changes that have taken place in the nature of occupational structure of a society. Now we will discuss the organization and nature of the entire economy.

#### § 1. MEANING AND TYPES OF ECONOMIC SYSTEM

##### Meaning of Economy

By economy is meant the whole of economic life and its institutions. Agriculture, industries, transport, commerce, banking, insurance, marketing, pricing, distribution, economic policy of the state, standard of living, etc., are all included in the economy of a country. *Economic life and its economic institutions are called Economy.*

##### Types of Economy or Economic Systems

The economy of a country can be organized in several ways. A country adopts one or the other form of economic organization according to its economic conditions and the culture and ideas of her inhabitants. *The different ways of organizing the economy of a country are called economic systems.* Economic systems are of five types :

- (a) Feudalism,
- (b) Capitalism,
- (c) Socialism,
- (d) Communism, and
- (e) Mixed Economy.

#### § 2. DESCRIPTION OF ECONOMIC SYSTEM

##### (a) Feudalism

Feudalism is that system in which the society is divided into feudal lords and serfs. Its object is to make feudal lords rich and prosperous. Serfs do hard work and contribute to the wealth and happiness of aristocrats. In such a system output is limited, and production is carried on by simple methods. Because of the population being small, noblemen can lead luxurious lives even with limited production. In fact, free expenditure on consumption is supposed to be a matter of dignity and to be heavily indebted, a sign of aristocracy. Thus the emphasis is on consumption, and not on savings which can be used for improving and extending agriculture, industries, etc. Naturally under these conditions economic progress is little. From this discussion, the following outstanding features of feudalism become clear :

- (1) The society is divided into feudal lords and serfs ;
- (2) Its object is to maximize the prosperity of feudal lords ;

- (3) The emphasis is on consumption, and not on saving or capital formation ; and
- (4) The output is small and economic progress limited.

Feudalism was in existence in the earlier stages of the formation of society. Its existence is possible only when population is limited and common men do not have an awakened sense of self-respect and progress. In modern times it is not so, and consequently feudalism is now an out-of-date notion. The object of society should be to improve the standard of living of all persons and to make their life happy ; it is clearly very unjust to make feudal lords rich and serfs poor. Feudalism came to an end after a brief existence. When population increased in course of time, production did not increase along with it; and it was replaced by another system which had remarkable capacity for increasing output. This system is called Capitalism.

### (b) Capitalism

Capitalism is a system of social organization in which society is divided into those who possess the means of production and those who are without it. The owners of the means of production are known as *capitalists* ; and those who do not own capital but possess only labour power, are called *labourers*. Labourers or workers sell their labour power to capitalists at a certain wage. Capitalists enjoy the right of private property, *i.e.*, they have a right of calling certain property as their own, and the State protects that right. Whatever profits are earned by capitalists, belong to them. The State allows them to purchase, own and use means of production as they like. Capitalists and labourers are both free to compete with each other. They can higggle and bargain about the wage level or working conditions or any other thing. Capitalists are free to produce or not to produce, to engage a particular labourer or to dismiss him. Similarly, workers are free to work in the factory of a capitalist or refuse to work at a higher or a lower wage. This freedom is called Economic Freedom. Capitalists are actuated only by profit motive. The chief characteristics of Capitalism are, therefore, as follows :—

- (i) Division of society into capitalists and labourers;
- (ii) Monopoly of the ownership of means of production by capitalists ;
- (iii) Freedom to workers to sell their labour power ;
- (iv) Freedom to own private property ; and
- (v) Freedom to compete.

Capitalism came into existence in the wake of the Industrial Revolution, *i.e.*, in the middle of the 18th century. It succeeded in increasing the productive capacity of the society enormously. But since it allowed powerful capitalists to engage weak labourers, the former began to give very low wages to workers and to retain for their own use a part of the wealth produced by workers. This is called *Exploitation*. Exploitation has resulted in the poverty of the majority of the people in the various countries of the world. Therefore, many persons now want the society to be organized on some other basis.



**(c) Socialism**

Socialism is these days offered as an alternative basis of social organization. Socialism aims at giving to everybody equal opportunities of making progress, *i.e.*, equal opportunities to grow, or get educated and trained according to one's bent of mind and to develop one's abilities generally. After that, everybody will be offered an appropriate job and there will be no unemployment. The socialistic Government will not allow private property and competition. In other words, all the factories, farms and shops, etc., will be nationalized and will be owned and managed by the Government. Every able-bodied person will have to work in a Government concern where he will get the reward rightly due to him. This, in brief, is the picture of a socialistic society. The chief features of Socialism, therefore, are as follows :

1. Equality of opportunity ;
2. Abolition of private property and competition ; and
3. Fair reward, *i.e.*, justice in distribution.

**(d) Communism**

We hear much of Communism these days, particularly because of Russia which has already adopted Communism and has made rapid economic progress under this system. But Communism is a particular variety of Socialism. Communists have been rightly styled as "socialists in a hurry". In other words, they are socialists of extremist variety. Their differences from socialists are, in many cases, of degree or details only. For instance, socialists advocate the granting of compensation to the capitalists whose properties are nationalised : but communists are not in favour of giving any such compensation. Again, socialists intend to establish a socialist government by appealing to voters, so that the socialist party is given the control of the government machinery by the public itself. Communists, on the other hand, believe in organizing military strength and capturing Government machinery by force. It will be seen, therefore, that there is much in common between Socialism and Communism.

**(e) Mixed Economy**

Most of the thinkers in the world have now come to believe that Capitalism is not a well thought out system of social organization. It can work successfully only to a certain extent, after which many difficulties arise making its working difficult or even impossible. But many thinkers do not like to discard Capitalism altogether. They want to cure Capitalism of its evils by adopting socialistic remedies. In other words, they want to alter the complexion of a capitalistic economy only when necessary and that too slowly and cautiously bring it nearer to Socialism. The economy that is thus established is neither wholly capitalistic nor wholly socialistic—it is a mixture of both. That is why it is called a Mixed Economy. The most prominent feature of a Mixed Economy is that its productive organization is divided into two sectors—private and public. Private sector is the area of operation of private entrepreneurs. Public sector is the area of Government enterprise.

### Which is the Best System

It is impossible to say off-hand which of these systems is best. This is, in fact, the most important controversy of the present-day world. We, on our part, feel that such a discussion is mostly academic ; and the appropriateness of one system or the other must be determined with reference to the stage of economic progress that a society has attained. However, there is a distinct tendency these days to move towards Socialism, fully or partly.

### INTERMEDIATE QUESTIONS

1. Describe the characteristics of different stages of economic progress. What are the tests of economic development as shown by the progress from one stage to the other ? (Punjab, Inter., 1954).

2. Analyse carefully the main features of competitive economy. (Punjab, Inter., 1952).

3. Distinguish between economics and economic systems. Give the main features of any economic system with which you may be familiar. (Punjab, Inter., 1949).

4. Why is the present economic system called capitalist system ? What are its basic defects ? (Delhi, Higher Secondary, 1954).

5. State the essential features of the capitalistic system of production. What are the defects of capitalism ? (Delhi, H. S., 1952).

6. Write a careful note on the important characteristics of the present economic order. (Delhi, Qualifying, 1953).

7. Why is the present economic order called the capitalist system ? How do you distinguish it from the feudal system ? (Delhi, Qualifying, 1952).



# Consumption

Book III

Chapters 12-19

## CHAPTER 12

### MEANING AND IMPORTANCE OF CONSUMPTION

The consumption of wealth is, in its only important form, a phenomenon which cannot be separated from the production of wealth.— *Cherbuliez*.

#### § 1. MEANING OF CONSUMPTION

##### Definition of Consumption

(i) *Use of Wealth for the Satisfaction of Wants.* Human beings feel numerous wants which press for satisfaction with varying intensity. Some wants are primary and, therefore, very urgent, like the want for food, clothes and shelter ; while there are other wants which are not so urgent, as for example, the want for joyrides and costly dresses. Whatever the nature of wants, they come up for satisfaction, sooner or later. Men satisfy these wants by the use of wealth. When they are hungry, they appease their hunger by taking food ; when thirsty, they quench their thirst by drinking water or orange syrup. *The application of wealth for the satisfaction of wants is known as consumption.*

(ii) *Direct Use of Wealth.* Wealth, it may be emphasised, may be applied for the satisfaction of wants directly or indirectly. If you are thirsty and drink a glass of water, or if you are hungry and take a few biscuits, you satisfy your wants directly; the application of wealth in these cases will be called *consumption*. But when you sow seeds in the field and burn coal in the factory, wealth is used for the satisfaction of wants only ultimately ; immediately it is applied for the production of agricultural stuffs and manufactured articles. In such cases, then, the commodities used lead to the satisfaction of wants only *indirectly*. Such indirect use of wealth for the satisfaction of wants is known as *production*, and not consumption.

*Definition.* Now we can define consumption as follows : *The application of wealth for the direct satisfaction of wants is known as consumption.*

##### Another Definition

A pertinent question may be asked at this stage : What happens to an article when it is consumed ? When you eat a biscuit, what happens to it ? A layman may probably say that it is *destroyed*. But scientists tell us that matter is indestructible ; hence the above answer is not correct. When we eat a biscuit, it is not destroyed but is simply converted into blood and foreign matter—it is disarranged and loses its utility as a biscuit. It is the utility of the biscuit which is destroyed and not the biscuit itself. We can, therefore, define consumption as



*the destruction of utilities for the direct satisfaction of human wants.* (The reader must not make the wrong statement that consumption means the destruction of matter; it refers to the destruction of *utility*.)

Marshall regards consumption as *negative production*. Just as the production of material products, says he, is really nothing more than a rearrangement of matter which gives it new utilities so the consumption of them is nothing more than a disarrangement of matter, which lessens or destroys its utilities.<sup>1</sup>

### Some Examples

From the above definition it is clear that the scope of the term "consumption" is fairly wide. The actual eating of a thing is, of course, consumption; but the wearing of clothes, the riding of a horse, the reading of books, the writing on a piece of paper, the ringing of a bell, are also acts of consumption, since utility is destroyed or lessened in each of these cases. Very often when a man is said to consume things he does nothing more than to hold them for his use, while, as Senior says, they are destroyed by those numerous gradual agents which we call collectively *time*.<sup>2</sup> Pictures and curtains may thus be consumed by the passage or effluxion of time, even without being touched by their consumers.

### Everyday Meaning of the Term 'Consumption' •

The word "consumption" is a word of daily usage and conveys several senses. In ordinary talk, "*consumption*" is sometimes used in the narrow sense of eating; and at others, in the wider sense of destruction. Again, in the science of medicine, consumption is another name for tuberculosis. The sense in which this term is used in Economics is easily distinguishable from its foregoing meanings. Consumption, in the economic sense, is much wider than mere eating. It also differs from destruction in a basic sense. When an article is 'destroyed' it does not satisfy a want; while 'consumption' always involves the satisfaction of some want or the other. If a coat is 'destroyed' by fire, it does not satisfy human want during the course of its destruction; but if it is 'consumed' by constant wearing, it satisfies a vital human want for clothing. Moreover, the expression 'destruction of goods' is open to objection inasmuch as matter cannot be destroyed, but the term 'consumption' has no such drawback. Finally, consumption in economic sense has nothing to do with tuberculosis.

### Consumption as a Division of Economics

We have explained above the act of consumption in the economic sense. Consumption is also a department of Economics, and should be distinguished from the act of consumption. In the department of Economics known as Consumption, we study wants, their origin and

<sup>1</sup> Men do not consume matter, but only utilize it; that is to say, the amount of matter present in the world is not diminished by the act of consumption, but some of it is no longer capable of satisfying a particular want.—Moreland, *An Introduction of Economics*, p. 20.

<sup>2</sup> Marshall, *Principles of Economics*.



satisfaction, the laws governing their satisfaction, etc. The department of Consumption centres round the act of consumption.

### Kinds of Consumption

(2) *Slow and Quick Consumption.* The act of consumption may be slow or quick. When you drink a glass of water, the act of consumption comes to a speedy end, and is *quick*. But when you purchase a new shirt, you wear it for months together before its utility is completely destroyed. The extraction of satisfaction out of a shirt is diffused over a long time. The act of consumption in this case is continued and *slow*.

Articles subject to quick consumption are known as *perishable goods*. Water, mangoes, apples, fish and such other articles are perishable goods. Their utility is destroyed in the very first act of their consumption. Articles subject to slow consumption are known as *durable goods*. The house, the typewriting machine, the book, the electric bulb, are all durable goods. They yield repeated satisfaction.

(2) *Productive and Final Consumption.* Some older economists divided consumption into productive consumption and final consumption. The application of goods for the creation of utilities (*i.e.*, for production) is called by them *productive consumption*. Productive consumption in this sense leads to indirect satisfaction of wants. The application of wealth for the direct satisfaction of wants is called by them *final consumption*. If some bricks are used in the construction of a factory meant for producing certain articles, their consumption will be called productive consumption. But if they are used in the construction of a residential house, their consumption will be final consumption.

Modern economists have, however, given up the use of these two terms. They define the term consumption in the sense in which we have defined it, namely, the application of wealth for the direct satisfaction of wants. The so-called productive consumption, *i.e.*, the application of wealth for indirect satisfaction of wants, is in their opinion, not consumption at all ; strictly speaking, it is production. Consumption is a term which is now restricted to the so-called final consumption.<sup>3</sup>

## § 2. IMPORTANCE OF CONSUMPTION

### Consumption is a New Subject

Consumption as a separate subject was born only a few decades ago. Early economists did not study consumption and rarely made it a department of Economics. Ricardo, Mill and other old economists centred their attention on production which, in their opinion, was the most important department of Economics, and neglected consumption

3 There is also what Riedel calls 'immaterial consumption' as when a utility disappears either because the want itself to which it ministers disappears or because the views have changed as to means to be employed toward its satisfaction.



which they thought was the concern of private individuals.<sup>4</sup> It was left to Marshall to detect this mistake of omission on the part of his predecessors and to lay emphasis on the importance and utility of the study of consumption, so much so that it is now regarded as the keynote of Economics.

Earlier economists neglected the study of consumption not merely because they did not want to write anything on it but because they could not do so for two very pertinent reasons. Firstly, their study of wants and the allied topics was not thorough and they could not, therefore, make a full study of consumption. Secondly, the relationship between the consumption of wealth and welfare was not much appreciated in the days gone by, and under such circumstances consumption could not come to the forefront. As time rolled on, the scientific study of such psychological phenomena as wants and satisfaction began to be made, and the relationship of welfare with consumption became prominent, while the growth of humanitarian spirit led to a comprehensive and penetrating inquiry into the causes of welfare. The result was that consumption began to be studied. And today it is considered to be the most important department of Economics. Indeed, some economists seriously think that consumption has been given a disproportionately large importance.

### **Importance of Consumption in Economics**

Consumption now occupies a very important place in the science of Economics. *It is, in fact, the beginning and end of Economics.* Human beings undertake economic activities merely because they have wants which call for satisfaction. It is the existence of wants and need of their satisfaction which lead to economic efforts. Human wants constitute the mainspring which sets all the economic forces to work. Consumption is, as such, the starting-point in Economics. Again, all economic activities are undergone with one ultimate purpose, namely, the satisfaction of wants. The production, exchange and distribution of wealth, have only this one final aim. Consumption may, as such, be also considered to be the end of Economics. It is that significant point from which the circle of economic activities makes a start and at which it reaches completeness. Consumption is, therefore, rightly regarded as the goal of economic activities as well as their starting-point.

Again, national welfare and prosperity are very much dependent on the nature of the consumption of the inhabitants. Other things remaining the same, the more voluminous the consumption, the greater is the prosperity. But the composition of the articles consumed is a very important matter. If the articles are wisely selected and are useful, progress of the individuals and the country is certain. But in the absence of wise expenditure, no amount of richness can bring real happiness and progress. It is easier to earn money than to spend it

<sup>4</sup> I cannot but deem it a subject of much regret that the fascination of the mathematical treatment of economic questions, and the ambition to make Political Economy an exact science, should have led to the practical exclusion of the whole department of Consumption.—Walker, *Political Economy*.



properly. The study of consumption is as such, pregnant with great possibilities.

### **Production vs. Consumption**

Since consumption is the beginning of Economics, it is described before production in almost all the modern books on Economics. Some old economists gave the first place to Production ; because, they said, no consumption is possible unless wealth is produced ; and production should, therefore, be discussed first. But this is a weak argument and can be met by a counter-argument that wealth is produced for consumption and no wealth will be produced if it will not be consumed. Hence consumption should be treated prior to production. The fact remains, that consumption is the beginning and end of the Economics and should therefore, have priority of treatment.

### **Practical Advantages of the Study of Consumption**

Consumption is important not only in theory but also in practice, which can best be illustrated by a few examples.

*Its Importance to Statesmen.* Statesmen, who are engaged in practical problems, very well realize the importance of consumption. Efficiency in the production, exchange and distribution of wealth will not achieve anything unless the consumption of wealth is such that the efficiency of labourers can be maintained. Again, statesmen have to see that citizens spend their money wisely. Prosperity depends not so much upon opulence as upon its proper use. Proper expenditure of money is more difficult than its earning. A man may produce considerable wealth and may be very rich ; but if he does not know the proper use of wealth, his richness is of no use. Suppose a man earns Rs. 100 per month and spends it very wisely and proportionately on the various heads of expenditure ; while there is another man who earns Rs. 200 per month, but who is addicted to drinking, cinema-going and such other habits, with the result that a proportionately large share of his income is spent on harmful objects and very little is obviously left to take care of his necessary requirements. On comparing the lives of both these men, we unmistakably find that the life of the first man is better than that of the second because the latter does not know the secret of wise expenditure. By his habits, a bad consumer may injure not only himself but also others since bad habits are very infectious. Considerations such as these have unfailing bearing on the social life of the State. Government have now become alive to the fact that if they want to make their subjects happy and flourishing they must see that their expenditure is wise. The policy of prohibition of using intoxicating liquors and drugs and the entertainment tax on cinema shows and other like actions, have this end in view. Indeed, one will be half a statesman if he neglects the consumption side of the social life of his country.

*Its Importance to Businessmen.* The practical utility of the study of consumption can be proved by showing its importance to businessmen who are practical through and through. Businessmen frequently anticipate demand ; they have to estimate the extent of future consumption on the basis of the present trends of fashion and the past records.

If their estimate comes out correct, their profits are large. But if unluckily they somehow miscalculate demand and indulge in "over-production", i.e., production more than demand, goods do not sell and much loss is incurred. A careful study of consumption is, thus, the foundation-stone of business success.

*Its Importance to Householders.* To the householder, in particular, the study of consumption is very profitable. This study teaches him the principles by following which he can achieve maximum benefit out of his expenditure. The knowledge of the law of equi-marginal utility and of family budgets enables him to spend money wisely and achieve a gain in the satisfaction of his wants.

#### INTERMEDIATE QUESTIONS

1. What meaning do you attach to the term consumption in Economics? (Punjab, Inter., 1948).
2. What is consumption? Are the following cases of consumption: (a) seeing a cinema show, (b) taking a glass of water from a domestic servant, (c) looking at a watch? (Punjab, Inter., 1949).
3. "Satisfaction is the end of economic activities." Explain this with reference to the importance of consumption as a subject of study in Economics. (Raj., I. A., 1951).



## CHAPTER 13

### WANTS : THEIR DETERMINATION AND CHARACTERISTICS

For at least half his expenditure an ordinary individual does not know what he wants and out of the other half, for at least a half he does not get what he wants. It is only by becoming the creature of habit and the victim of mimicry or simulation that he accomplishes very badly a task which is really more difficult than that of earning his income.—*Dibble*.

#### § 1. MEANING OF WANT

##### What is a "Want" ?

"*Want*" is a word with which the reader is very well familiar. If he is asked to give the equivalent word for 'want', it will most probably be 'desire'. In the ordinary language, 'want' and 'desire' are used in the same sense; but economists draw a fine distinction between them. The word 'desire' is used by them in the ordinary sense, namely, a conscious longing for a thing. But the term 'want' has special significance. *Want is that desire which is backed by the ability and willingness to satisfy it.*

*Some Examples.* Suppose a man desires to have a book; he also possesses the money to purchase it; while he is willing to exchange the money for the book. In such a case, the desire is *effective* and will be called a 'want'. But suppose a poor man has the desire for a motor car, but he has no money to buy it. His desire is obviously *ineffective*, i.e., incapable of satisfaction, and cannot be called a *want*. Again, take the case of a miser who will be glad to see his little daughter wearing gold ornaments; he has enough money to purchase ornaments; but he may not like to part with money because of his greediness. In this case again, his desire is *ineffective* and cannot be called a *want*.<sup>1</sup>

To sum up, there are three essentials of a want : (1) a desire for an article; (2) the ability to satisfy it, or possession of the means of its satisfaction; and (3) the willingness to the means for the purpose. When a desire is backed by ability and willingness to satisfy it, it is called '*effective desire*' or '*want*'. In other words, want is that effective desire for a particular thing which expresses itself in the effort or sacrifice necessary to obtain it.<sup>2</sup>

#### Effective and Ineffective Desires

We can divide desires into two classes :

(1) *Effective Desires.* These are the desires which prove effective, i.e., which are satisfied. In other words, the person concerned possesses the means of satisfying them and he also uses them for securing satisfaction. Such a desire is called *Want*. It is also known as *Demand*.

1 Effective desire is also called *Demand*. Thus *wants* and *demand* have come to have the same meaning. See in this connection J. K. Mehta, *Ground-work of Economics*.

2 See Penson, *Economics of Everyday Life*, p. 14.

(2) *Ineffective Desires*. These are the desires which do not prove effective, *i.e.*, which are not satisfied. This happens when the person concerned either lacks the means of satisfying them or the readiness to use them for securing satisfaction, or both. Ineffective desire is not called want.

### Importance of Wants in Economics

The study of wants is of great importance in Economics. Wants are the seeds which give rise to the tree of economic efforts. It is the feeling of certain wants that calls forth economic activities. That is the reason why production, exchange and distribution of wealth take place. When wants are satisfied, economic activities come to a natural conclusion. Wants thus constitute the point whence economic efforts begin and where they come to an end.

Wants are important also because they determine the standard of living of the people and their productive efficiency. A man whose wants are more and better satisfied than the other is more efficient, other things being equal. The number and variety of human wants normally satisfied constitute a good index of the material prosperity of a country.

## § 2. WANTS AND ECONOMIC ACTIVITIES

### The Circle of Wants and Activities

Wants and economic activities are very closely related. We have already emphasised that wants lead to activities. Wants are the real motive force which set the entire economic mechanism into motion. The servant works because he has wants to satisfy ; the shopkeeper maintains a shop so that he may earn money for the satisfaction of his wants ; the lawyer argues cases, the teacher teaches students, the clerk works in office, the driver drives the car, with the same object, *viz.*, the satisfaction of certain wants which press for satisfaction. If men cease to have wants, the entire economic machinery will come to a stand-still. That wants lead to activities, is a well-established fact which does not require much deliberation.

Just as wants lead to activities, similarly activities, while satisfying the wants which cause them, lead to the creation of fresh wants.

In this manner, wants give rise to activities ; the latter satisfy the old wants but give rise to new wants ; the latter again lead to new activities ; and so on. The circle of increasing wants and increasing activities has an indefinite course to run. It has no end. Indeed it is this unending phenomenon

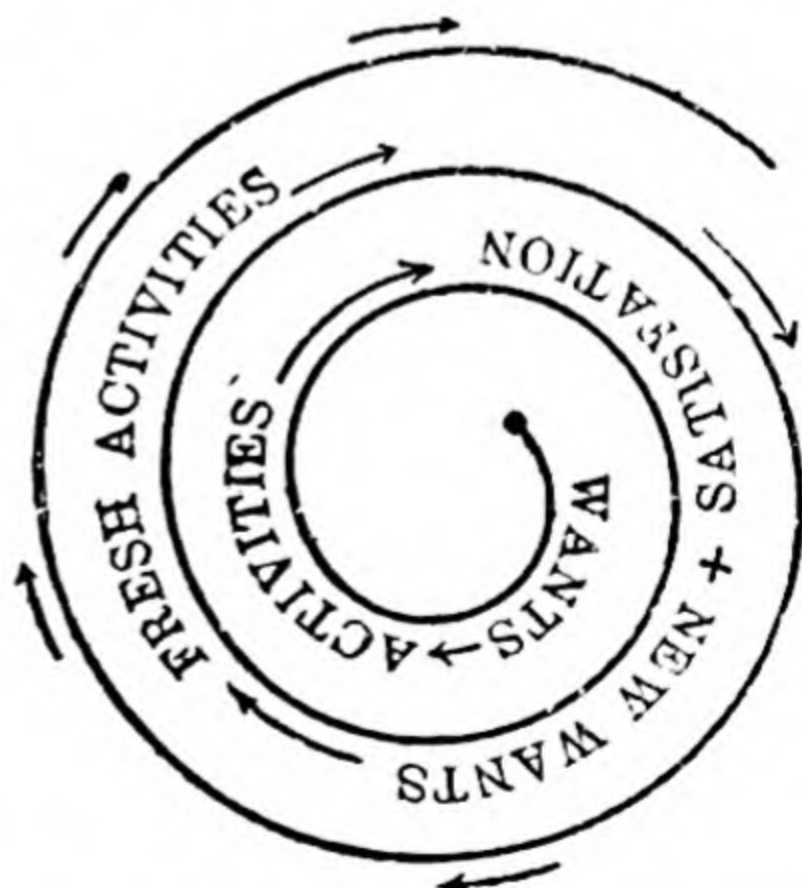


Fig. 9. Explaining the relation between wants and activities.



of wants leading to activities and the activities leading to fresh wants which has been the primary cause of the modern civilization. For civilization consists in a multiplicity of wants and the ability to satisfy them.

### Historical Illustration

During their initial abode on this planet men early felt certain wants which, they found, must be satisfied for keeping themselves alive. For this purpose they made efforts. Wants thus led to activities.

These activities were meant to harness the forces of Nature in the production of wealth, in a primitive sense in the earlier days but in a more imposing way later on. These activities could be carried on efficiently only with certain implements or tools. For instance, if men wanted to kill animals for food, they required sharp stone weapons or arrows. If they wanted to pluck fruits, they sometimes felt the need of some missiles or bamboo poles. They began to feel the want for these articles which aided them in their economic activities. In this way activities led to the creation of fresh wants.

There is another sense also in which economic activities led to the creation of new wants. As man obtained control over Nature, he could satisfy his old wants in a limited time and began to have leisure. To occupy the latter, he invented new wants, which called forth fresh activities. If the leisure was spent in festivities, he felt wants for dainty dishes and other delicious things. If it was spent on inventing improved and imposing dresses, he required cloth and other articles. Thus activities led to the creation of new wants. It is at this stage that the love of display and distinction springs up in human heart.<sup>3</sup>

Speaking broadly, therefore, although it is man's wants in the earliest stage of his development that give rise to his activities, yet afterwards each new step upwards is to be regarded rather as the development of new activities giving rise to new wants than that of new wants giving rise to new activities.<sup>4</sup>

This is the way in which wants and activities act and react on one another in a never-ending fashion. And the circle of wants and activities, which is the life-blood of economic progress, never comes to an end.

### § 3. DETERMINATION OF WANTS

#### Factors Governing Wants

The nature and intensity of human wants depend upon several factors, the chief of which are physical, physiological, ethical, social and habitual or customary.

(1) *Physical Factors.* Physical factors determine the character

<sup>3</sup> Senior remarks, "Strong as is the desire for variety, it is weak compared with the desire for distinction: a feeling which if we consider its universality and its constancy that it affects all men and at all times, that it comes with us from the cradle and never leaves us till we go into the grave, may be pronounced to be the most powerful of human passion." This great half-truth, comments Marshall, is well illustrated by a comparison of the desire for various foods with that for various dresses.—Marshall, *Economics of Industry*, pp. 56-57.

<sup>4</sup> Marshall, *Ibid.*



and the extent of wants to a considerable degree. The people of a cold country like England have to use woollen clothes all the year round and also to take some intoxicants to keep them active ; but in a warm country like India, we require woollen clothes during the winter and light cotton clothes during the summer, while intoxicants are not only unnecessary but actually harmful to the constitution.

(2) *Physiological Factors.* In order to keep ourselves physically fit we have to take a diet which may supply all the elements, like proteins and vitamins, which are necessary for health and vitality. If a man is thin, milk may probably be useful to him; but it will be injurious to a fat man because it will make him fatter still.

(3) *Ethical Factors.* The ethical and religious view-point lends its colour to the wants of a person. The nature of ethical ideals of a man and the degree of importance he attaches to them, determine his wants to a fairly large degree. If a man believes in the simplicity of life as an important associate of spiritual development, his wants may be very few and simple. But if, on the other hand, he considers the satisfaction of a large number of wants as the mark of progress, his wants will be numerous and complex.

(4) *Social Factors.* The wants of a person are determined not only by physical, physiological and ethical considerations, but also by the stage of general progress of society. The society, for instance, has set rules for the disposal of a dead body or for the preformance of marriage. Members of the society instinctively respect such social rules and allow their wants to be moulded and fashioned by them almost unconsciously. The offer of *pan* and smoke to visitors, the burning of a dead body by Hindus and its burying by Muslims, and such other things are all set by social rules. The dictates of society are governed by the stage of progress attained by it. The social commandments of a primitive society are elementary and sometimes without reason; the dictates of an advanced society are refined and are based on reason.

(5) *Economic Factors.* Wants are largely determined by one's richness or poverty. A poor man has few and simple wants. He may satisfy those wants which support life, but he rarely gets an opportunity of enjoying comfortable and luxurious articles. This is not the case with the rich who allow their wants to multiply freely, with the result that their wants are numerous and mostly of comfortable and luxurious nature. It is due to the poverty of an Indian that his wants are so few and to the richness of an American that his wants are so numerous.

(6) *Habits, Customs and Fashion.* Personal habits of a man and the prevailing fashion have a great determining influence on wants. It is a fact which students will verify from their own experience that a man who has done a thing in a particular way tends to follow the line of least resistance and goes on doing it in the same way; and the more often he repeats the same, the less disposed he becomes towards change.<sup>5</sup> The influence of personal habits on one's wants can,

<sup>5</sup> Moreland, *Op. Cit.*



therefore, be clearly realized. Again, it is also a fact borne out by experience that a man who has to do a thing for the first time tends to do it in the same way as he sees his neighbours doing it. Thus a man who lives entirely alone will develop habits or customs and all the ordinary actions of his life in his own ways (for instance, in the matter of preparing and taking food, of the cut of his clothing and of wearing them, etc). But as a rule man does not live alone and in ordinary life he follows the customs and habits of the people among whom he lives and has his being. Many of our habits are formed while we are still young. We do things in the way we see our relations and friends doing them. And as we grow in years and discretion, we acquire fresh habits from those with whom we generally come in contact. A student on entering college, tries to copy the way of living of some of his teachers and other students ; a young man entering an office as a clerk does what the other clerks do ; and the same thing is true in all occupations.

### **Wants of an Indian Labourer**

A few illustrations may well be given at this stage. First let us take the wants of an Indian labourer. His wants are determined not so much by reason as by social factors and habits, customs and fashion. The food that he takes is the one to which he is used from his birth. Any fundamental change in it is very displeasing to him. If he is a Bengali, he must have rice ; if an upcountry man, he must have *chapattis*. So far as shelter is concerned, conditions are largely out of his control. He lives in dirty, insanitary, overcrowded and congested quarters. He cannot help it because of his poverty. Even where he can improve the conditions he fails to do them partly because he is habituated to that sort of living and partly because he does not want to lose the company of his old friends and acquaintances. His clothing is largely governed by habits and traditions. He very often wears the same types of clothes which his forefathers used to do. But the element of fashion makes its influence felt in this respect and a change in the type of clothes he wears is visible.

### **Wants of a College Student**

Let us now examine the factors which determine the wants of a college student. Here the elements of fashion and habit play the most important *role*. When a student newly comes to the college, he takes to the use of a fountain-pen, tooth-paste and such other things, mainly because they are in fashion. Cinema-going may begin as a fashion, but it soon becomes a habit and cannot be easily got rid of. It is probably within your experience that those of your friends who do not follow the current fashion and continue the primitive way of living are called by such names as *Buddhu* and *Shikarpuri* ; while those who are very particular about their dress and appearance are dubbed as showy, vain dandies. It becomes almost obligatory to a newly admitted college student to mould his dress, food and other walks of his life according to the current standard.

Human wants are numerous and of different kinds. They differ from country to country and from place to place in the same country.



Nevertheless, they possess certain common characteristics on which important laws of Economics are based. They are discussed below :

(1) *Wants in General are Unlimited.* Human wants multiply endlessly. At soon as one want is satisfied, another want begins to be felt. Man is thus spurred on to pursue an end which is ever vanishing before him. At present you may feel the want of a fountain-pen; but if you purchase it, you may next begin to feel the want of a hat or a book, of which you had little idea before. Take the case of a poor man who is starving. If he is given very coarse food, consisting of millets and pulses, he will be well satisfied with it. But if he is sure of getting these things, he will begin to require better kind of food, for example, rice, *chapattis*, vegetables and *ghee*. Later he will like the food to be better served; he will require metal dishes and wares instead of the earthen vessels which at first satisfied him. His wants will, thus, go on increasing limitlessly.

The progress of society has been simultaneous with an increase in the quantity and quality of human wants. The primitive barbarian had very few wants which were of a simple nature. With an increase of knowledge, men began to feel new wants, the satisfaction of which was followed by still newer wants. It was this process of endless multiplication of wants which led up to the material civilisation of today. Wants are increasing constantly with wider diffusion of knowledge, improvements in the means of transport and communication and growth of trade. Upon this simple fact is based the *Law of Progress* which states that material progress and increase of wants go hand in hand.

(2) *Each Particular Want can be Fully Satisfied.* Though wants in general are unlimited, any particular want has its limit. The want for a fruit or a book can be satisfied by consuming the desired fruit or book. Every individual want is capable of complete satisfaction. A want is satisfied slowly and gradually till its full satiety is achieved. Suppose you are hungry. After taking the first *chapatti*, your want is partially satisfied and you require the second *chapatti* less urgently. This process of decreasing urgency of wants (or diminishing utility of commodities) goes on till your want is completely satisfied and the next *chapatti* has no utility to you. Upon this characteristic of wants is based the important *Law of Diminishing Utility* which states that, other things being equal, the utility of each successive unit of a commodity decreases to a person as the stock of that commodity increases.

(3) *Wants are Recurrent.* Though each want can be completely satisfied at any particular time, it may be felt again after some time. For instance, you may eat bread during the midday when you feel hungry ; and for the time being your want will be satisfied. But you will again feel hungry in the evening and will want food. Wants are thus recurrent.

(4) *Wants are Competitive.* Wants in general compete with each other. If a man has one rupee in his pocket, he may go to a cinema show, or purchase a book, or give himself up to the pleasure



of a sumptuous dinner, or spend it on joy-rides. All these wants compete with each other in the priority of satisfaction.<sup>6</sup>

(5) *Wants Vary in Intensity.* Though wants are competitive, they are not all equally urgent. They vary in intensity, in other words, according to the individual and according to his circumstances at the time the wants are felt. One satisfies them in the order of their intensity. One has, indeed, to arrange one's wants in order of their urgency or intensity in one's own mind—in this, one is helped by one's sense of feeling and is not required to make conscious effort—and one tries to satisfy them in that order. A man who is extremely thirsty and only a little hungry will first procure a glass of water and only thereafter biscuits and cakes. A very hungry boy will prefer biscuits to toys. Were all the wants of equal intensity, economic life would have become a matter of pure indifference in which no place could be given to discretion and choice. Upon this characteristic of wants is based the law of equi-marginal utility.

(6) *Some Wants are Complementary.* Some wants are co-operant or complementary. If either of them is satisfied, the other must follow suit. They are satisfied together and, therefore, each of them is complementary to the other or others. If you purchase a car or a fountain-pen, you must also purchase petrol or ink respectively. If you want to travel in a first class railway compartment, you should have a good leather suit-case also.

(7) *Wants Become a Matter of Habit.* Most of the wants are acquired and artificial; only few wants are physiological and instinctive. Generally, they are acquired quite early in life and are felt so repeatedly that they become a matter of habit. Smoking, for instance, is purely artificial. Nobody is a born smoker, we somehow begin smoking, very often for the fun of it, and later get habituated to it. Wants such as these constitute our standard of living and are of very compelling nature.

(8) *Present Wants More Important than Future Wants.* To an average person a present want appears to be more important than a future want. A normal man lives in the present and will make greater sacrifices to ensure the gratification of present than of future wants. Generally we do not look so far ahead as to make provision for future wants while we are satisfying the present ones; indeed, we rarely think of future wants at such a time. This is due to two reasons. Firstly, our telescopic faculty (*i.e.* the capacity to look ahead) is defective and makes us feel that the present want is more important

<sup>6</sup> Some text-book writers illustrate the competitive character of wants by giving an example like this. If a man wants something to cover his feet, he may purchase either a pair of shoes or *chappals*: shoes and *chappals* thus compete with each other. This example does not appear to be very sound. Shoes and *chappals* seek to satisfy one and the same want, *viz.*, want for a cover to the feet. If they compete between themselves, it means that articles seeking to satisfy one and the same want compete among themselves. It is wrong to conclude from such examples that wants compete among themselves, since only one want is taken into consideration in this case.



than the future want. Secondly, the future is very uncertain. If we make provision for the future, at the cost of the present, and if, unfortunately, we expire early, we would lose a certain amount of satisfaction.<sup>7</sup> On the basis of this characteristic, Seager observes: "If goods available for present consumption be called *present goods*, and those to be available in future, *future goods*, the law may be formulated as follows: *The utility of future goods is less to the normal consumer than the utility of present goods of like kind and quality by an amount varying directly with the degree of futurity*"<sup>8</sup>

(9) *Wants are Determined by Social Standards.* Most of our wants are determined by social standards of tastes rather than by independent judgments of individual consumers. This is conspicuously true of wants for clothing, shelter and amusement. That men—not to say of women—dress with reference to the opinion of their neighbours, changing the styles of their clothes, their shoes, their hats and even their collars, to conform to the vagaries of fashion, is a fact of familiar observation. There is a little more independence in the selection of dwelling houses, but here too the taste of many is subservient to that of the few who form independent judgments. As regards amusements, it is notorious that one lad follows another, bicycle-riding giving place to golf, and golf—for those who can afford it—to motoring.<sup>9</sup>

(10) *Knowledge Increases Wants.* The tendency of wants to increase is universal; but the rate at which they multiply depends upon the rate of the spread of knowledge. In an Indian village, lying remote from a railway station, new wants arise slowly and in some cases they lie in a dormant stage; that is, the villagers do not feel conscious of any unsatisfied wants. But in the towns this is not so because knowledge and information spread quickly there, while they spread very slowly in villages. As knowledge increases, people learn new means of satisfying their wants and the desire to obtain satisfaction of these wants becomes intense. Before the invention of motor cars, wealthy people were satisfied with horses and carriages; but when motor cars were invented and a few of them were brought to India, people soon felt attracted towards them and began to feel actual want for them.<sup>10</sup>

7 A. C. Pigou, *Economics of Welfare*.

8 Seager, *Principles of Economics*, pp. 71-72. Though very general, this characteristic of wants is more marked for some social classes than for others. It would not be far from the truth to say that young children and savages live entirely in the present; that the manual labouring classes, especially in climates where the winters are mild, look only a few months or a few years ahead in their economic calculations; that the great class of artisans and merchants plan with reference to their own lives and the lives of their children; and that the founders of large family fortune include generations yet unborn in their view. *Ibid.*

9 *Ibid.*, p. 72.

10 The higher the level of civilisation and culture, the more numerous and the more varied are the man's wants. We are told that in the 18th century it was very usual to come across labourers who, finding that their wants could be satisfied by 3 days' work each week, preferred to be idle for the rest of their



This example illustrates how new wants arise from increased knowledge. In our country knowledge is steadily increasing through education and through the extension of trade and travel. It is not likely, therefore, that in near future the progress of India will be so rapid as to lead to a condition in which the larger proportion of the people will have their wants completely satisfied, than it is the case at present. On the contrary, we should expect that though people might be able to satisfy increasing numbers of wants, new wants will arise more and more quickly so that there will always remain some unsatisfied wants.<sup>11</sup>

### Some Alleged Exceptions

Certain exceptions to the above characteristics of wants are pointed out. They are, as a matter of fact, apparent rather than real.

(1) Some persons, *sadhus* and ascetics, who have renounced this world, feel a limited number of wants. To them wants in general are not unlimited; nor do they increase in variety. To them there is no social standard to fashion their wants.

This is, of course, true; but an ascetic is not a social or an average man and, therefore, lies beyond the scope of Economics. In Economics, we study the wants of *a normal and social human being* only.

(2) It is usually stated that each particular want is capable of complete satisfaction. But certain wants appear to remain unsatisfied almost for ever. A few instances are given below :

(a) *Want for display* is an example of this nature. A man who wants to distinguish himself through display, always seems to be in want of things like ornaments, motor cars, magnificent buildings, etc., and unceasingly spends money on such objects. The more he possesses such things, the more he can display himself and the more he wants them. His want of display appears to be insatiable.

The above reasoning is correct. But the want of display is not the want for a particular commodity but for a large number of commodities. If you pick up a particular commodity out of the group of articles of display and increase its supply, the want for it will go on decreasing and a point will sooner or later come when the next unit of that commodity will cease to have any utility.

(b) *Want for power* is a similar example. Some men want power over men; and the more power they get, the more they want. The lust for power seems to be real and insatiable ; but men wanting power are not ordinary men. Economics is not concerned with abnormal characters.

(c) *Want for money* also appears to be insatiable. Indeed, it time. At the present day it would not be difficult to find examples of people who would earn larger incomes if they worked harder or longer but for whom additional satisfaction that could be obtained is not a sufficient inducement to make the greater effort required. Education and social improvement result not only in greater productive efficiency but also in greater capacity to enjoy—  
Penson, *Op.*, *Cit.*, p. 14.

<sup>11</sup> Moreland, *An Introduction to Economics*, pp. 192-193.



appears that its utility does not decrease at all; and if it does, it does very insignificantly.

But money is, not required for its own sake, but for the sake of the large number of commodities which it can purchase. As such, money is not a single commodity but it is a group of all the commodities it can purchase. It is, therefore, only natural that the want for it cannot be fully satisfied, wants in general being unlimited.

(d) *Miser's Love for Money.* A miser wants money and the more he gets it the more he requires it. It seems to be an exception to the general law that each particular want is satiable. But a miser is not an average man. He is as far removed from the average man as the ascetic or *sadhu* who does not come under the scope of Economics.

### § 5. MULTIPLICATION OF WANTS

Sometimes the question is asked : Is the multiplication of wants desirable ? This question is extremely controversial and much can be said on both the sides.

#### **It is Desirable**

Those who say that the multiplication of wants is desirable say that when a want is satisfied, some satisfaction is obtained. Consequently, if you satisfy a larger number of wants, you will get a larger volume of satisfaction, which is very desirable. *Secondly*, modern progress and civilization consist in increasing the number of wants. The most primitive man needed very few things ; some leaves or bark of trees to cover his person and some rough tools to kill animals and detach flesh from skin. But as he became more and more civilized, his wants began to increase. And today in his most civilized state, human wants are almost limitless. It is a historical fact and proves that progress or civilization consists in multiplication of wants. *Thirdly*, if we reduce our wants, our incentive to make economic progress or assert our individuality and rise in the world would be damped. The Malaya aborigine has few wants and while immigrants work and develop his country, he sits under a tree and cheerfully smokes and rests, not doing anything and not caring for what others do. This is sure sign of decay. *Fourthly*, if we do not believe in increasing wants, we would become economically weak so that any country of the world can come and make us a subject nation. If the standard of living of the citizens of a poor country rises, their urge to be strong will greatly strengthen.

#### **It is Undesirable**

There are thinkers of the other school as well who believe that the multiplication of wants can never be desirable. These gentlemen are generally of a religious bent of mind and believe in spiritual development. They give the following reasons in support of their view : (i) If we have to satisfy a large number of wants, we will have little time for spiritual development which alone gives true pleasure. (ii) Not only this, but multiplication of wants and constant efforts to satisfy them make us materialistic and therefore make us unfit for spiritual deve-



lopment. (iii) Even on economic grounds wants should not be multiplied for a very good reason. It is true that if you satisfy more wants, mathematically you get more satisfaction. But once your wants increase, they increase almost limitlessly ; so that even if you are able to satisfy many of them, you cannot even think of satisfying the rest. The wants which you cannot satisfy are a source of discomfort or pain to you. The net amount of satisfaction that you, therefore, get is very little. Really if you increase your wants to a considerable degree, you may get very little net satisfaction.

### The Right View

The above are the views for and against increasing the number of wants. We on our part believe that truth lies somewhere in between these two extremes. If we have very few wants, we will have little incentive to make progress. But we have many wants, our discomfort will greatly increase. We should, therefore, have neither too few wants nor too many of them. The total satisfaction which we get on balance by increasing our wants can be represented by the adjoining diagram.

We have measured the total net satisfaction along OY axis and number of wants along OX axis. SmS' is the net satisfaction curve. In the beginning, as we increase our wants, our satisfaction goes on increasing till the point m arrives. At this point, if we satisfy ON wants, our satisfaction will be maximum, *i.e.*, mN. But if we increase our wants beyond that point, our net satisfaction begins to decline ; mS' curve suddenly goes down.

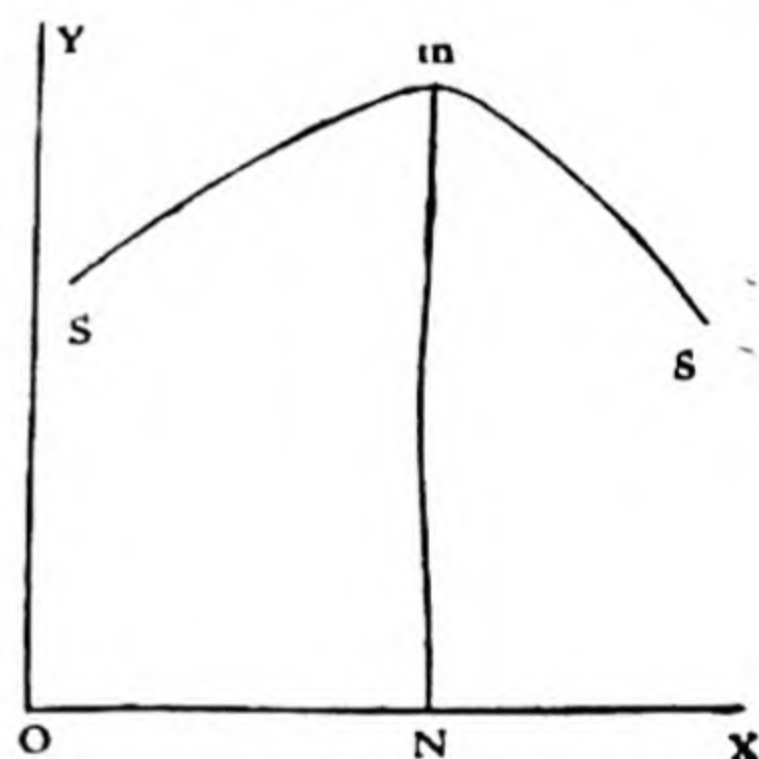


Fig. 10.

It is thus clear that the multiplication of wants is desirable only up to a certain extent. It is, however, impossible to give a precise degree of the extent to which wants should be multiplied.

### INTERMEDIATE QUESTIONS

1. "Man's wants have various characteristics, each of which is of great importance, for on each depends same great economic law." Amplify this statement. (Bombay, I. A., 1939).
2. Write a note on "Complementary Wants and Alternative Wants." (Bombay, I. Com., 1949).
3. What are the chief characteristics of human wants ? Show how the science of Economics takes these characteristics into account. (Bombay, I. Com., 1939).
4. Describe the characteristics of human wants and the nature of economic efforts necessary to satisfy them. (Mysore, Inter., 1944).
5. What are the main characteristics of human wants ? Which want is more urgent and why ? (Patna, I. A., 1946S).
6. Analyse the nature of man's material wants. (Punjab, I. A., 1951).
7. Discuss the main characteristics of human wants. Is the multiplication of wants desirable ? (Raj., I. A., 1949).

- 7A. Do wants give rise to activities or activities give rise to wants ? Illustrate your answer. (Raj., I. A., 1948).
8. Discuss the chief characteristics of wants, and show how they are of basic importance in the study of Economics. (Raj., I. Com., 1950).
9. Mention the factors on which wants depend ? Is it a fact wants increase more rapidly than income ? If so, what steps you take to balance the two ? (Raj., I. Com., 1946).
10. Classify human wants and explain their characteristics. (Utkal, I. Com., 1952).
11. What are the chief characteristics of human wants ? Discuss their importance in the study of Economics. (U. P. Board, I. A., 1948).
12. Carefully define wants, and explain their chief characteristics (Sagar, I. Com., 1949S).
13. Discuss the characteristics of human wants. Can they ever be satisfied completely ? (Banaras, I. Com., 1945).



## CHAPTER 14

### CLASSIFICATION OF WANTS

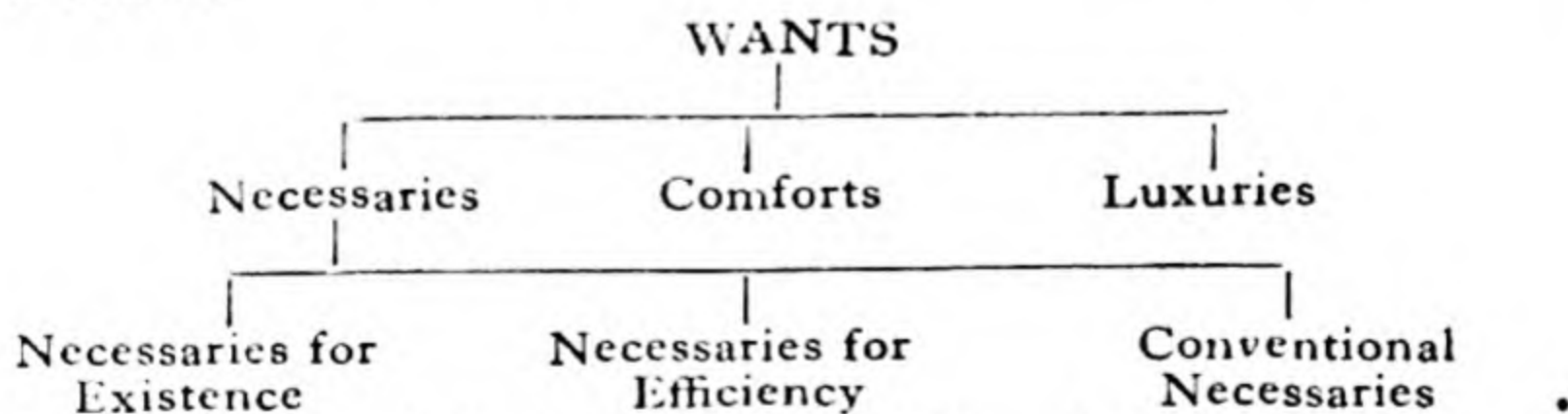
Consumption may be economised by a change of habit but any stinting of necessities is wasteful.—*Marshall*.

We have already seen that wants vary in intensity or urgency. All wants are not of the same intensity; some wants are more intense, others less intense. Wants which are most urgent are known as *necessaries*; those which are least insistent are known as *luxuries*; while those of medium intensity are known as *comforts*. The order of the urgency of wants and the order in which they are normally satisfied is as follows: (i) Necessaries, (ii) Comforts, and (iii) Luxuries.<sup>1</sup> These are the three classes in which wants can be divided.

#### 1. Necessaries

By necessities we mean those wants which are of very primary and elementary nature, so much so that if they are left unsatisfied, acute pain is caused. Their satisfaction is necessary for the preservation of life, efficiency or social prestige.<sup>2</sup>

Necessaries are of three varieties. In the first group come those wants which must be satisfied in order to preserve life. If we do not satisfy these wants, we shall not be able to keep alive. They are known as *Necessaries for Existence*. In the second group fall those wants which must be satisfied for the maintenance of our efficiency. They are known as *Necessaries for Efficiency*. If we consume these articles our efficiency will remain intact; otherwise; it will deteriorate. In the third and final category come those wants which have to be satisfied in order to maintain social prestige. These are known as *Conventional Necessaries*. The following classification of wants makes this subdivision clear :



*Necessaries for Existence.*<sup>3</sup> The articles which are just necessary for keeping a man alive are known as necessities for existence. They

1 The order in which wants are satisfied is not a matter of set rules or regulation but of personal habits, tastes and desires which vary. Wants will be satisfied in order of their urgency, in the absence of any such disturbing factor as sense of moral obligation or duty, etc.

2 Students must not write "articles of necessary." They should write, "articles of necessity" or "necessaries" instead.

3 Also named as "absolute necessities."



include that minimum quantity of food and drink, clothing and shelter without which life cannot be preserved.

Necessaries for existence are not the same in all the countries and climates and for all time to come. "In cold countries the term includes, in addition to sufficient food and drink, a certain amount of clothing and also some sort of house for shelter; in the plains of India the necessary amount of clothing and shelter is very small and perhaps a blanket for the winter is all that a man absolutely requires, so that here the term necessities for existence means very little more than the small amount of grain and water that is sufficient to keep people alive".<sup>4</sup> In India there are large numbers of unfortunate and poor persons who do not even get all the articles necessary for existence and actually semi-starve.

(2) *Necessaries for Efficiency.* Necessaries for existence are meant to keep a man alive. In order that he may be able to work efficiently in the occupation he happens to be engaged in, a man has to consume certain things over and above the bare necessities for existence. Such articles which are necessary for the preservation of one's efficiency are known as Necessaries for Efficiency.

Moreland observes that this term includes everything which a man must consume in order to work efficiently at his occupation and educate his children up to the point where they can be expected to do as well as he has done. In India the term includes (i) better and more well-balanced food than is just necessary for existence; (ii) a certain amount of clothing and furniture and an airy and well-ventilated house for shelter; and (iii) opportunities for medical treatment and for the education of children at least up to the stage which he himself has reached. A very small proportion of the people in India can enjoy all the necessities for efficiency mostly because of poverty and partly because of ignorance.

(3) *Conventional Necessaries.* Conventional necessities are those necessities which must be consumed because of social conventions and in order to maintain social prestige. A man lives in a society having certain set traditions or conventions or customs which each member must follow. For instance, the society requires a man to offer *pan* and tobacco when a guest comes; to give a feast when a marriage takes place; to undergo certain religious ceremonies when somebody dies. A man has to follow these customs and conventions on pain of social discredit, *badnami* as it is called, and sometimes even excommunication. This is particularly so in a custom-ridden country like India.<sup>5</sup> This accounts for the great urgency of this class of wants. In fact, many people sacrifice the consumption of articles of efficiency, in

4 Moreland, *An Introduction to Economics*, p. 151.

5 "To this class of conventional necessities belong the want for tea, coffee and *pan* among the higher classes in India and the want of *huqqa* among the masses. To this class also belong all our wants connected with social and religious ceremonies and in a custom-ridden country like India, it is not difficult to find people who for months and years go on economising on their absolute necessities to make a grand show for a day or two on the social wants."—B. G. Bhatnagar, *Outlines of Economics*, p. 42.



order to consume conventional necessities. For instance, cultivators and labourers will semi-starve rather than not offer *huqqa* or *pan* to the visitors or not give a feast on the occasion of a marriage or death. Similarly many a student will give up the consumption of such healthy stuffs as butter and *ghee* in order to enjoy cinema shows which every polished student is expected to see.

*Factors Determining Necessaries.* The factors governing each class of necessities are different. Necessaries for existence are primarily determined by environment and physiological and economic factors. Necessaries for efficiency are, of course, determined by the nature of work a man is expected to do. Necessaries for efficiency of a blacksmith must naturally differ from those of a lawyer or a teacher. Much discretion has to be used in selecting necessities for efficiency. Conventional necessities are of course determined by social customs and conventions which are an index of the stage of social development.

## 2. Comforts

Necessaries, it may be repeated, are just sufficient to keep a man alive, to preserve his efficiency at work and to maintain his social prestige. This is the bare minimum for ordinary living. Usually some other nice articles have to be included in consumption for a decent living. Articles of comfort are of this nature. Their consumption affords appreciable pleasure and also increases consumer's efficiency slightly ; while their non-consumption neither causes much pain nor does it decrease actual efficiency (though it certainly prevents the additional efficiency which their consumption would have yielded). Obviously, articles of comfort enable a man to lead a richer and fuller life than what is otherwise possible. Good shoes, fine *kurta*, cinema shows and such other articles may be cited as examples of articles of comfort.

## 3. Luxuries

Luxuries are those articles whose consumption affords very great pleasure but does not contribute to our efficiency; and whose non-consumption neither causes any pain nor decreases our efficiency. Palatial buildings, the maintenance of Rolls-Royce and other costly cars, the keeping of elephants by Indian princes and the possession of costly paintings of renowned painters are some of the examples of luxuries. Because articles of luxury do not increase our efficiency but simply give us pleasure, their consumption is often regarded as useless and is looked down upon. This is the reason why Professor Gide defines luxury as the "satisfaction of a superfluous want" and Professor Ely calls it "excessive personal consumption".<sup>6</sup>

<sup>6</sup> The following table gives a provisional and rough list of necessities, comforts and luxuries :

Necessaries	$\left\{ \begin{array}{l} \text{for sustaining life} \\ \text{for mere subsistence} \\ \text{the minimum} \end{array} \right.$	$\left\{ \begin{array}{l} \text{i.e., a reasonable amount of} \\ \text{plain wholesome food, of} \\ \text{decent clothing and of healthy} \\ \text{home surroundings.} \end{array} \right.$
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There are certain articles of luxury, like wine, which give us only fleeting pleasure but decrease our efficiency quite considerably. Their non-consumption causes much pain if one gets addicted to them, though it prevents a deterioration of efficiency which would otherwise result. They are known as *extravagances*.

### The Standpoints of Classification

The above classification of wants into necessities, comforts and luxuries has been made from two points of view ; (i) efficiency and (ii) pleasure and pain.

*Efficiency.* Those articles which when consumed preserve efficiency and which if not consumed decrease it, have been called necessities. The articles which when consumed contribute to efficiency slightly and which if not consumed do not decrease actual efficiency (but cause a loss of efficiency which could have been otherwise achieved) are known as articles of comfort. Finally, those articles which if consumed do not increase efficiency, and which if not consumed do decrease efficiency, are known as articles of luxury. When the consumption of the latter actually decreases efficiency, they are called articles of *extravagance*.

	Effect on efficiency		Effect on pain and pleasure	
	When consumed	When not consumed	When consumed	When not consumed
Necessaries	Preservation	Great decrease	Slight pleasure	Acute pain
Comforts	Slight increase	No decrease in actual efficiency (but loss of possible increase in efficiency).	Sufficient pleasure.	Slight pain
Luxuries	No increase	No decrease	Very great pleasure.	No pain (unless used).
Extravagances	Decrease	Prevention of possible decrease.	Momentary pleasure	Much pain if one gets addicted.

Chart II. Showing the distinctions between necessities, comforts and luxuries.

Comforts	{ for fuller life for more wholesome existence decent standard of living	{ i.e., better food, clothes and housing with some provision for recreation and amusement and for the satisfaction of intellectual needs.
Luxuries	{ for refinement of life for expensive habits and amusement a more elaborate mode of living	{ i.e., costly motors, ornaments, table delicacies, etc. together with the indulgence of expensive taste in art, literature and travel.

—Penon, *The Economics of Everyday, Life*, p. 19.



*Pain and Pleasure.* The second point of view of the classification is the causing of pain and pleasure. When consumption of an article gives only slight pleasure while its non-consumption causes great pain, it is known as an article of necessity. When, however, its consumption gives sufficient pleasure while its non-consumption causes slight pain, it is known as an article of comfort. Finally, when the consumption of an article gives ample pleasure while its non-consumption causes no pain, it is known as an article of luxury. If the consumption of an article simply gives us momentary pleasure while its non-consumption causes intense pain provided one gets used to it, it is known as an article of extravagance.

### **Necessaries, Comforts and Luxuries are Relative Terms**

It must not be supposed by the reader that a particular article is an article of necessity, or comfort, or luxury for all the people and all the time to come. In fact, the personal circumstances of the consumer, *e.g.*, the income, occupation, surroundings, habits, etc., determine whether an article is one of necessity or of comfort or of luxury to him. It follows, therefore, that the same article may be a necessity to one, a comfort to another and a luxury to the third. For instance, a car is a necessity for a medical doctor who has to rush from one patient to another with the least possible loss of time ; it may be a comfort to a professor since it keeps him refreshed for the lectures, saves his time and thus somewhat increases his efficiency; but it is undoubtedly a luxury to an idler who uses it merely for joy-rides. Again, tea is a necessity for an educated Indian, while it is probably a luxury for an Indian cultivator. Shirts were once considered to be articles of luxury in Europe but now they are articles of bare necessity. In India they are still articles of luxury for many poor people. A carriage is a comfort to a woman of fashion, a necessity to a physician and a luxury to a tradesman.

An article may similarly be one of luxury to a person at one time, of comfort to him at another and of luxury at still another time. For instance, a fountain-pen is obviously a luxury for a small child reading in an infant class. It becomes an article of comfort to him when he becomes a student of IX or X class ; but it becomes a necessity for him when he joins a college and has to take down notes very quickly.

It would, indeed, be wrong then to classify all the articles into those of necessity, of comfort, and of luxury, and to expect that it will apply to all persons and be valid permanently. These three terms are at best only relative ; and when we say that a particular article is an article of necessity, or comfort, or luxury, all that is meant to say is that it is so in respect of a particular person at a particular time.

### **Order of Consumption**

It is sometimes said that a person first spends his income on necessaries, then on comforts and finally on luxuries. This statement is generally and largely true. In case a man spends his income most wisely, he would naturally act in this manner. Necessaries are most urgent and would receive his first attention. Comforts would then be secured ; and luxuries would be obtained only in the last. But unfor-

Unfortunately everybody does not spend his income wisely. Much of our expenditure is thoughtless and careless ; and when it is so, we often spend on comforts and luxuries even if our necessities have not been satisfied. An ekkawala may thoughtlessly go to a cinema show and may then be left with only a few pice which may not bring him enough food. Such cases are not rare. Another reason of unwise expenditure is lack of intelligence and understanding ; and an educated man would not spend his money so badly as an illiterate person. *Thoughtlessness and lack of knowledge of correct expenditure are the two reasons why the proper order of expenditure is not always followed.*

#### INTERMEDIATE QUESTIONS

1. Explain the classification of wants into necessities, comforts and luxuries. (Madhya Bharat, I. A., 1953).
2. Discuss the problem of the classification of wants into Necessaries, Comforts and Luxuries. (Madhya Bharat, I. Com., 1952).
3. Write a note on conventional necessities. (Patna, I. Com., 1950).
4. Explain the classification of wants into necessities, comforts and luxuries. (Punjab, Inter., 1953).
5. What are conventional necessities and necessities for efficiency ? Give example from the life of a peasant farmer. (Punjab, Inter., 1948).
6. Distinguish between necessities, comforts and luxuries. On what basis is this classification made ? Point out the importance of this distinction. (Raj., I. A., 1953).
7. Explain fully the distinction between necessities, comforts and luxuries. (Raj., I. A., 1951).
8. How do you classify consumption into necessities, comforts and luxuries ? Illustrate your answer. (Raj., I. Com., 1948).
9. Classify wants. What is meant by conventional necessities ? (Utkal, I. A., 1951).



## MEASUREMENT OF UTILITY

The money which a person is prepared to offer for a thing measures directly not the satisfaction he will get from the thing, but the intensity of his desire for it,—A. C. Pigou.

## § 1. MEANING OF UTILITY

**Definition**

Utility is the capacity of a commodity to satisfy some human want; in other words, it is the want-satisfying power of a commodity. It is clear from this that the article which possesses want-satisfying power, has utility; but if a commodity cannot satisfy any human want, it cannot be said to possess utility. We have already discussed the meaning of utility in Chapter 8 of this book.

**Difference between Utility and Satisfaction**

Some older Economists could not distinguish between utility and satisfaction; and they stated that satisfaction (of wants) is utility. But modern economists clearly mention that utility and satisfaction are quite different things. Professor A. C. Pigou of Cambridge University has even stated that the intensity of wants is also quite separate from the satisfaction of wants. Therefore, we propose to explain the difference between utility and satisfaction below.

*Circle of Want-Utility-Consumption-Satisfaction.* In order to explain this, we should know how our want is satisfied. It has the following stages :

- (1) First of all, we feel a *Want*;
- (2) Then we fix upon a commodity which possesses *utility*, *i.e.*, which possesses the power to satisfy that want ;
- (3) After that we *consume* that commodity;
- (4) As a result of consumption, our want is *satisfied*.

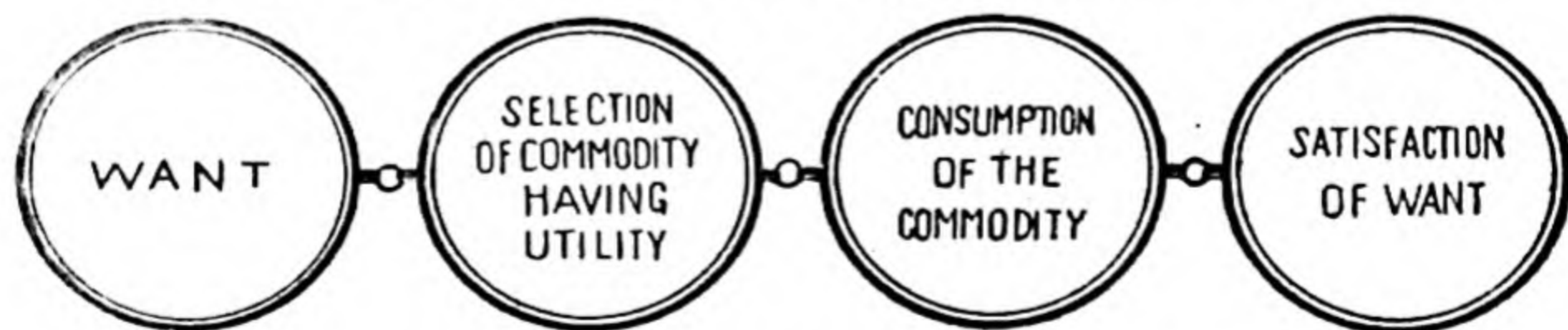


Fig. 12. The Circle of Satisfaction of a Want.

**Difference**

It is clear from this that the utility is yielded by a commodity; but the satisfaction is of a human want. Moreover, the relation between the two is of means and end. Utility is means; satisfaction is end

because satisfaction is secured through utility (or a commodity possessing utility).<sup>1</sup>

*Caution.* Therefore, the reader should clearly realise that the statement that "the satisfaction of want is utility" is quite wrong. Utility is the want-satisfying power of a commodity.

### Want and Utility

We will now discuss the relationship between want and utility. We have explained in Chapter 8 that utility is not an inherent quality of a commodity; on the contrary, it depends upon the fact that the consumer wants that commodity. If the consumer wants that commodity, then it has utility; and if he does not want that commodity, then it will not have any utility. Therefore, want leads to utility. A commodity that is not wanted cannot have utility.

### § 2. MEASUREMENT OF UTILITY

It is a fact of common experience that the utility of all commodities is not the same; some commodities have greater utility than others. A question, then, naturally arises: Can we exactly measure utility?

#### Utility Cannot be Directly Measured

Economists do not possess any accurate means or apparatus for measuring utility. If you want to measure temperature, you can measure it with a thermometer. If you want to measure atmospheric pressure, you can measure it with a barometer. If you want to measure cloth, you can measure it with a yard-stick. But no such accurate measure is available for measuring utility. Psychologists have not yet been able to devise any such measure; and, therefore, economists are unable to measure utility directly.

#### Money Measure of Utility

*Money Measure.* Economists have, however, devised an indirect method of measuring utility. *The amount of money that a person is prepared to pay for a commodity rather than go without it, is a measure of its utility.* Suppose your examination is very near and you want a fountain pen so badly that you are prepared to pay even Rs. 100 for it, then the utility of the fountain pen is Rs. 100. If at that time you can pay at the most Re. 1 for a beautiful novel, its utility to you will be equal to Re. 1 only.

*Its Reason.* The circle of want-utility-consumption-satisfaction makes it clear that economists have to study three psychological conditions in connection with consumption :

- (a) Intensity of want;
- (b) Degree of utility; and
- (c) Quantity of satisfaction.

These three psychological conditions are different from each

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Triggs writes that "utility is the measure of satisfaction." Some writers have concluded from this that utility is itself satisfaction. But this is as much wrong as to conclude from the statement that "yard-stick is measure of cloth" that yard-stick is cloth or cloth is yard-stick.



other; and their measure should also be different. But economists can measure only one of them, *viz.*, the intensity of want. *The intensity of want is measured by the amount of money that a person is prepared to pay for the satisfaction of that want or for purchasing the commodity that can satisfy it.*

<p>THE AMOUNT OF MONEY THAT A PERSON IS PRE- PARED TO PAY FOR THE SATISFACTION OF THAT WANT (OR FOR THE COMMODITY THAT CAN SATISFY IT)</p>	}	=	{	<p><b>MEASURE OF INTENSITY OF WANT</b></p>
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THEREFORE ASSUME THAT:—



THIS IS THE MEASURE OF UTILITY  
THIS IS THE MEASURE OF SATISFACTION

Fig. 13. Measure of Intensity of Want, Utility and Satisfaction.

But they cannot directly measure the other two psychological conditions. Therefore, for practical purposes they have assumed that the measure of intensity of a want is also a measure of utility as well as of satisfaction. In other words, it has been assumed *that the amount of money that a person is prepared to pay for a commodity rather than go without it, is a measure of its utility and it is also a measure of the satisfaction that can be derived from its consumption.* In fact, it is not so; but for reasons of practical convenience it has been assumed to be so.

*Want, Utility and Satisfaction are Different Things.* The fact that all these three things have the same measure, should not be taken to mean that their nature is identical. In fact, want creates utility; utility is a means of satisfaction; satisfaction is the object of utility and negation of want.

### Unit Measure of Utility

We can use unity for measuring utility. Suppose you require Marshall's *Principles of Economics* very urgently while Parker fountain pen is not so important to you. Then, you may say that Marshall's *Principles* is twice as important to you as a Parker fountain pen; or, if the utility of Marshall's *Principles* is 2, the utility of a Parker pen is only 1. This measure of utility is, however, adopted only when the utility of two articles is to be compared or the utility of the same article at two different times is to be compared.



## CHAPTER 16

### THE LAW OF DIMINISHING UTILITY

The utilities of additional units of any good to any consumer diminish normally as his supply of units of that good increases.—Seager.

#### § 1. THE EXPLANATION OF THE LAW

The utility yielded by an article is subject to an interesting law which operates daily in the ordinary course of life. It is a matter of common observation that the more we have of a commodity, the less urgently we want its subsequent units ; in other words, the utility yielded by its succeeding units goes on diminishing. Suppose you are very hungry, and get a mango from somewhere ; its utility will be very great to you because it practically saves you from starvation. You will require a second mango also to satisfy your hunger ; but since a part of your appetite has already been satisfied, the second mango will not give you as much utility as the first one. The third mango will yield even less utility as compared with the second mango, for the same reason. The utility of each subsequent mango will similarly go on diminishing gradually, till you arrive at the stage where your hunger is fully appeased, and the utility of the next mango in succession drops to zero—it will be a matter of indifference to you whether you eat this final mango or not. Even if you consume it, you will probably dislike to eat further mangoes lest they might cause constipation—you will derive 'negative utility' or 'disutility' from them. This commonplace example shows that the utility of each successive unit of an article goes on diminishing as its supply goes on increasing , other things remaining the same.

This tendency operates universally and is visible in the case of all the objects satisfying human beings.<sup>1</sup> The first overcoat may give you more utility since it saves you from cold ; but the second one will afford less utility as it just provides a variety. The second pair of shoes, the second fountain pen, the second hat and the second table do not yield as much satisfaction as the first ones. Even the less material wants obey the same law. Eyes tire of beautiful pictures or scenes and ears are deadened by even the sweetest music in course of time.

This tendency is known in Economics as the Law of Diminishing Utility, and may be stated as below : *Each unit of a commodity gives, other things remaining the same, less utility to the consumer than the foregoing unit.*<sup>2</sup>

<sup>1</sup> As our capacity to enjoy food is limited so is our capacity to enjoy clothes. A normal person intensely feels the need for a respectable suit of clothes, a pair of shoes, etc. A second is less indispensable, but satisfies a lively desire. Additional suits satisfy wants of steadily diminishing intensities and in time the point of satiety is reached even by the most fastidious dandy.—Seager, *Principles of Economics*, p. 71.

<sup>2</sup> Marshall states this law as follows : "The additional benefit which a person derives from a given increase of his stock of a thing, diminishes with every increase in the stock that already has."—Marshall, *Principles of Economics*.



### Illustration

We shall now take an example to illustrate this law. Suppose a man has a big family and requires six maunds of wheat per month for its consumption. The utility of the first maund of wheat is very great to him since without it the members of his family will starve to death. The utility of the first maund, let us say, is 100. The second maund of wheat is necessary, but is not so urgent as the first maund. Its utility will, therefore, diminish, say to 80. The utility of the third maund will be still less, say 60; the utility of the fourth maund may be 25; that of the fifth, 10; and that of the sixth, zero. He will not purchase the seventh maund of wheat obviously because that is not required. The seventh maund has for him negative utility or 'disutility' firstly because he will have to spend money on it without getting any satisfaction in return; and secondly because the consumption of the additional maund might spoil the digestion of the consumers. Its utility may be said to be—20 (*minus* twenty). The utilities of the successive units of wheat may be tabulated as below :—

<i>Maunds of Wheal</i>	<i>Units of Utility</i>
1	100
2	80
3	60
4	25
5	10
6	0
7	—20

It is clear from the table how the utility of each following maund of wheat diminishes consecutively.

### Diagrammatic Representation

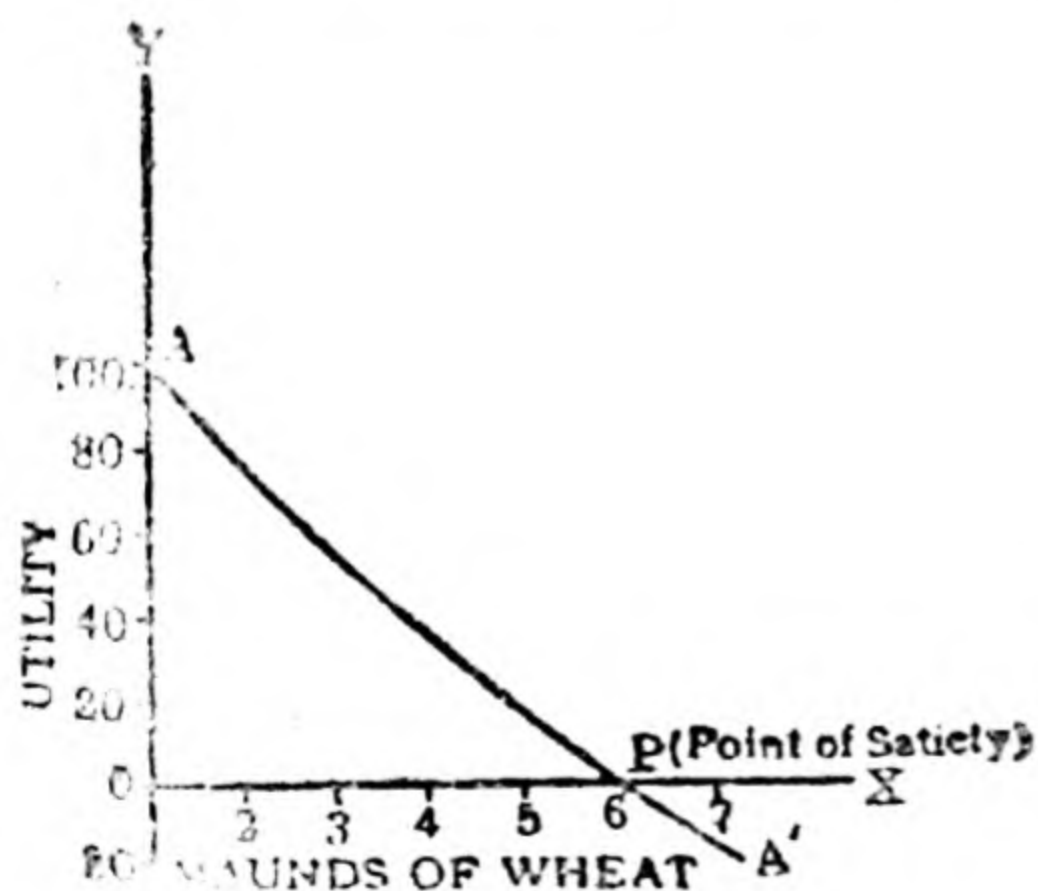


Fig. 14. Illustrating the law of diminishing utility.

curve AA' touches OX at the point P where the utility is zero. The seventh unit of wheat gives dis-utility so that the curve extends below

The above illustration can be represented by a diagram. In Fig. 14, maunds of wheat have been measured, along the OX axis; and utility along the OY axis. The first unit of wheat gives 100 units of utility and thus we get the point. A. We plot other points similarly and get the AA' curve by joining these points. This curve shows a steep fall representing the fall in utility. The utility of the first maund of wheat is OA but the utility of the sixth maund of wheat is zero. The

the line OX, which is the line of zero utility. The point P is the point of zero utility and is also known as the "*point of satiety*".<sup>3</sup>

## § 2. OTHER THINGS REMAINING THE SAME

In the statement of the Law of Diminishing Utility, we mentioned that the utility of each successive unit goes on diminishing, *other things remaining the same*.<sup>4</sup> The words 'other things remaining the same' might appear to the reader vague and useless; but this is not so. These words are very significant and imply the following important qualifications :

(1) *The units of the commodity must be similar in quality and quantity.* If this condition is not satisfied, the law may not operate. Suppose the first *chapati* given to a very hungry man is very coarse; but the next *chapati* is made of superior stuff and is very tasteful. The second *chapati* will evidently give him more satisfaction than the first one. The law of diminishing utility does not operate here because the units of *chapati* are not similar. If the second *chapati* is as coarse and rough as the first one, its utility would definitely be less than that

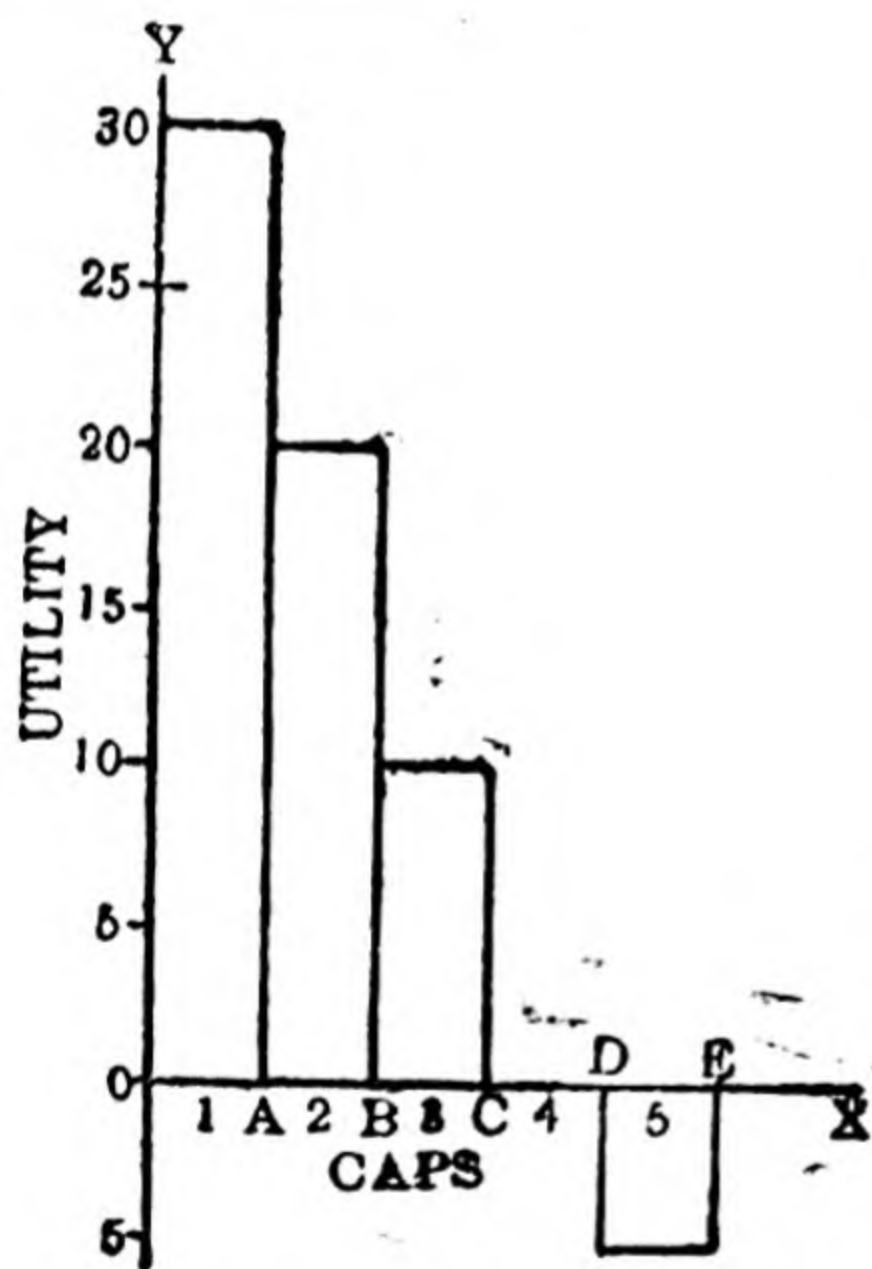


Fig. 15.

3 Diagrammatic representations are of two kinds : (i) *curves* as shown above and (ii) *rectangles* to be discussed below. If an article is divisible, *i. e.*, if it can be divided without any loss of its value, its utility is represented by a curve. Wheat can be divided without any loss in its value ; therefore, its utility has been represented by a curve as above. But take the case of a cap. If you cut a cap into two, its utility will be seriously curtailed. Cap is an indivisible commodity since its utility decreases if it is divided. The utility of indivisible commodities is best represented by rectangles. Rectangles give the idea of the separateness of each unit and therefore this method is adopted in the case of indivisible units.

Suppose the following is the table of utility of cap :—

Utility of Caps	Utility Derived
1	30
2	20
3	10
4	0
5	—5

In Fig. 15 each rectangle shows the utility of a unit. The first rectangle, representing the utility of the first cap, is the biggest. Each successive rectangle, representing the utility of each successive cap, goes on diminishing. There is no rectangle to represent the utility of the fourth cap obviously because its utility is zero. The utility of fifth cap is negative ; the rectangles representing its disutility is down the axis OX.

4 'Other things being equal' is the alternative expression.



of the latter. Similar considerations apply to the quantity of each unit. The quantity of each unit must remain the same. If the second *chapati* is twice as heavy as the first *chapati*, it is likely to give more satisfaction than the latter.

(2) *The period of consumption must be the same.* In other words, the period over which consumption is spread should be continuous and without break, otherwise the law will not operate. If a man, for example, takes food once in the morning and again in the evening, he might relish it more in the evening than in the morning probably because the hard work of the day has given him good appetite or because some good news has cheered him up. The law of diminishing utility does not apply here because the time of consumption is not continuous or the same. In fact, food has been taken twice and the law operates in each case separately. But if the second diet is taken immediately after the first diet, the utility of the former will be definitely less than that of the latter.

(3) *The mental outlook of the consumer should remain the same.* This is very important. The man who is taking food may, for instance, find that the sixth loaf that he has taken has yielded zero utility. If he now takes a little *bhang* or some other intoxicant, he may suddenly feel a craving for more loaves. It appears, then, that the law of diminishing utility does not apply in this case. Of course, it does not, because the mental outlook of the consumer does not remain the same.

(4) *If the period of consumption is long, the taste, habit and income of the consumer should remain the same.* In the case of durable goods, a change in either of three things, namely, fashion, habit and income, may hinder the operation of the law and may increase the utility of successive units of the commodity in question. For instance, a particular type of shoe may not be in *fashion* and its utility may be fairly low to a man; but if somehow it again comes into fashion, its utility will immediately increase. Again, a man not addicted to cigarettes does not derive any utility from them; but if he somehow acquires the *habit* of smoking, their utility will increase to him. Finally, a man may be so poor that it may not be worth his while to purchase a costly flower-vase; but if he suddenly becomes rich, he may begin to feel its necessity very urgently and its utility to him may increase. In all these three cases the law of diminishing utility does not operate because the fashion or habit or income has changed. The law operates only when these factors remain the same.

(5) *The price of the commodity and its substitutes should remain the same.* If an article becomes cheap, one may want it with increasing intensity and its utility may, therefore, increase. The utility of an article may also increase if the price of its substitutes has gone up, so that one will now shift one's consumption to the article in question whose utility has obviously gone up due to its comparative cheapness. The unchangeableness in the price of the article in question and the substitute thereof is important for the operation of the law.

### § 3. EXCEPTIONS TO THE LAW

The law of diminishing utility has almost universal appli-



cation.<sup>5</sup> If the various assumptions covered by the phrase "other things remaining the same" obtain in practice, the law *will* operate. Certain exceptions to this law are, however, suggested most of which are apparent rather than real.

### Apparent Exceptions

(1) *If we take a very small quantity of an article as unit, the law may not operate.* Professor Chapman gives the example of a man who wants to prepare tea but who has no coal. Suppose he gets an ounce of coal. This much of coal is practically useless to him and has hardly any utility. If he gets another ounce, the quantity of coal will come nearer the serviceable quantity, so that the utility of the next ounce will be greater than that of the first ounce. The utility of each additional ounce will thus go on increasing till he gets adequate quantity of coal; after this stage it will begin to diminish.<sup>6</sup>

In this diagram, the utility curve of coal (AA'A'') goes on increasing till the point A' is reached. At this point, sufficient quantity of coal has been obtained: therefore, the utility of each successive unit begins to diminish. This is the reason why AA' is a rising curve while A'A' is a falling curve.

In this case the law does not operate because the small quantity of coal taken in the example does not constitute a unit. In actual practice we find that the unit of a commodity is big enough to be of some service. Therefore, an ounce of coal is not really a unit; nobody uses coal in the units of an ounce; it is only a part of a unit.



Fig. 16.

(2) *Curious and rare objects are alleged to be exceptions to this law.* A stamp collector will attach greater importance to every new album more precious than before. Similarly a man who has the hobby of collecting old autographs, will feel more satisfied with every successive autograph he is able to collect. This exception is apparent rather than real because an average man is habitually actuated by hobbies; his simple wants and needs do not share the characteristics of hobbies. As such, this example is abnormal. Moreover, even in the case of such persons, a point will be reached, howsoever remote

<sup>5</sup> The tendency shows itself so widely and with so few exceptions that there is no significant inaccuracy in speaking of it as universal.—Tausig, *Principles of Economics*, Vol. I.

<sup>6</sup> Chapman, *Outlines of Economics*.



that may be, when the additional stamps or autographs will give diminishing satisfaction.

(3) *A drunkard is said to obtain increasing utility from each additional peg of wine.* The case of a drunkard is obviously abnormal since his mental outlook is changed after he takes the first peg of liquor. Moreover, a drunkard is not an average man and his actions are, therefore, not the concern of an economist. Finally, even in the case of such persons a point does arise when the utility of each successive dose begins to decrease. This exception is, therefore, apparent, not real.

(4) *Love of display, love of power and love of money are said to be other exceptions to this law.* The lust of this sort is almost insatiable and, therefore, the utility of every additional unit of the commodity ministering to any of these wants appears to be increasing. Such persons, however, are removed from the average man, and Economics does not study them. Moreover, even in these cases a point can arise when the law will set into operation. All of us have read the story of King Midas who was mad after gold but, when given an unlimited quantity of that metal soon grew tired and ceased to attach any value to it.

(5) *Sometimes it is said that the utility of a commodity begins to increase if a larger number of people begins to use it.* Telephone is the case usually cited in this connection. As the number of persons who have telephonic connection increases, the utility of the telephone also arises because its owner can now talk to a larger number of persons.

This example is fallacious, though the fallacy is difficult to detect. According to the law, the *successive units* of a commodity give diminishing satisfaction to a consumer. If the owner of a telephone takes one more connection, naturally its utility will be less to him than that of the former connection. In the example given above the telephonic connection with a particular person remains only one. Since successive telephones acquired by a person have not been taken into account, this example does not come under the law of diminishing utility. Moreover, this example anticipates a change in the habit of the people which is excluded from the conditions necessary for the operation of the law.

### Real Exceptions

(1) *Professor Taussig mentions that a second or a third reading of a good piece of poetry, or the hearing of good music for the second or third time, may yield greater utility than the first.* This exception seems to be real. This is a fact of our ordinary observation.

However, even in this case a point will arise, sooner or later, when the utility begins to diminish and the law will begin to operate. Our receptive faculty is, in fact, subject to exhaustion and takes time to recuperate.

(2) Some economists believe that when we begin to consume an article, the utility of each successive unit goes on increasing in the beginning. It is only after a certain stage in consumption is reached,

which is called by them the 'point of optimum satisfaction', that the utility begins to diminish. (Refer to Fig. 14, p. 100)

If the psychological assumption of the above example is taken to be correct, then it is a real exception to the law which does not operate till the point of optimum satisfaction is reached. But there is no positive proof to support the accuracy of the above statements; the validity of this exception cannot be definitely ascertained.<sup>7</sup>

### INTERMEDIATE QUESTIONS

1. State and explain fully the Law of Diminishing Utility. (Madhya Bharat, I. Com., 1953).
2. State and explain the Law of Diminishing Utility. What are its limitations? (Patna, I. A., 1949 S).
3. Explain carefully the Law of Diminishing Utility. Are there any exceptions to it? (Patna, I. A., 1945).
4. State and discuss the Law of Diminishing Utility. Draw a diagram to illustrate it. (Patna, I. Com., 1952 S).
5. Write a note on Marginal Utility. (Patna, I. Com., 1950).
6. State and explain the Law of Diminishing Utility. (Poona, I. A., 1950).
7. Explain clearly the idea of utility and state the Law of Diminishing Utility. (Punjab, Inter., 1951).
8. State and explain the Law of Diminishing Utility. What are its limitations? (Raj., I. A., 1952).
9. State and explain the Law of Diminishing Utility. Analyse the reasons for any exceptions. (Raj., I. A., 1949).
10. State and explain the Law of Diminishing Utility. How does it give rise to Consumer's Surplus? (Raj., I Com., 1947).
11. What is meant by (a) the law of diminishing utility, and (b) the elasticity of demand? Is there any connection between the two? (Travancore, Inter., 1943).
12. Explain and illustrate the Law of Diminishing Utility. What are its limitations? (Utkal, Inter. Com., 1952).

<sup>7</sup> These two exceptions can be concluded from the list of real exceptions, if we restate our law as follows: *After a certain stage in consumption is reached, each successive unit gives diminishing utility other things remaining the same.*



## CHAPTER 17

### MARGINAL AND TOTAL UTILITY

That part of a thing which he is only just induced to purchase may be called his marginal purchase, because he is on the margin of doubt whether it is worth his while to incur the outlay required to obtain it. And the utility of his marginal purchase may be called marginal utility of the thing to him.—*Marshall*.

#### § 1. MARGINAL UTILITY

##### Meaning of Marginal Utility

*Definition.* The last unit of a commodity consumed at any particular time is known as *marginal or final unit* ; and utility of the marginal or final unit is said to be the *marginal or final utility* of the article. If a man takes two oranges at a time, yielding 10 and 9 units of utility respectively, the second orange is the *marginal unit*, and its utility, namely 9, is the *marginal utility* of oranges. If he takes three oranges, instead of two, the third orange will be the marginal unit and its utility, say 7, will be the marginal utility of oranges.

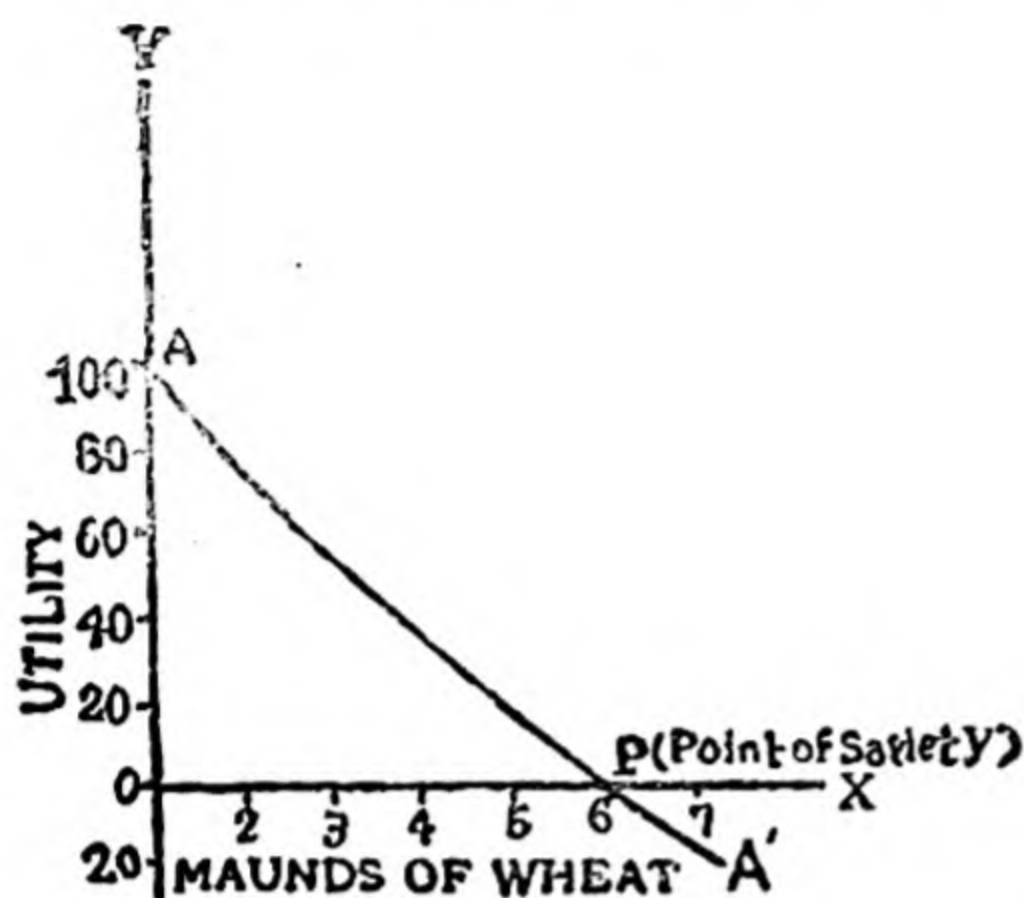
We can, therefore, define marginal utility as the *utility of the last unit of a commodity that is consumed at any particular time*.

*Essential Conditions.* Marginal utility is based upon two essential conditions : (i) consumption should take place at any particular time, *i.e.*, the act of consumption should be regular and unbroken, and (ii) the utility in question should be the utility of the marginal or final unit that is consumed.

*Illustration.* Suppose a big family consumes several maunds of wheat at a time. If it purchases only one maund of wheat, then it would be the marginal unit; and its utility—suppose it is 100—would be the marginal utility. If it purchases another maund of wheat also, then the second maund becomes the marginal unit; and its utility, *i.e.*, 80, now becomes marginal utility. If this family purchases five maunds of wheat, the marginal utility declines to 10. It becomes zero if six maunds are purchased, and —20 if seven maunds are purchased.

Wheat (maunds)	Utility
1	100
2	80
3	60
4	25
5	10
6	0
7	—20

*Diagrammatic Representation.* This table has been represented



diagrammatically in the adjoining figure. Along OX axis we have measured units of wheat and along OY axis the units of utility. Various points have been plotted and the utility curve AA' has been obtained by joining them. The marginal utility of wheat is 100 when only one maund is consumed, and zero when six maunds are consumed.\*

Positive, Zero and Negative Marginal Utility

Fig. 17.

Marginal utility may be positive, zero or negative. When the

\*The above is the example of a divisible commodity. We may also take the case of a cap which is an indivisible commodity. The adjoining table shows utilities derived from the use of a cap, and it has been diagrammatically represented in Fig. 16. OA, AB, BC, CD and DE represent the various units and the rectangles standing on them show the utility due to each of them. It is clear that when one cap is used, the marginal utility is 30 ; but when four caps are used the marginal utility is zero.

Table of units of cap	Utility
1	30
2	20
3	10
4	0
5	-10

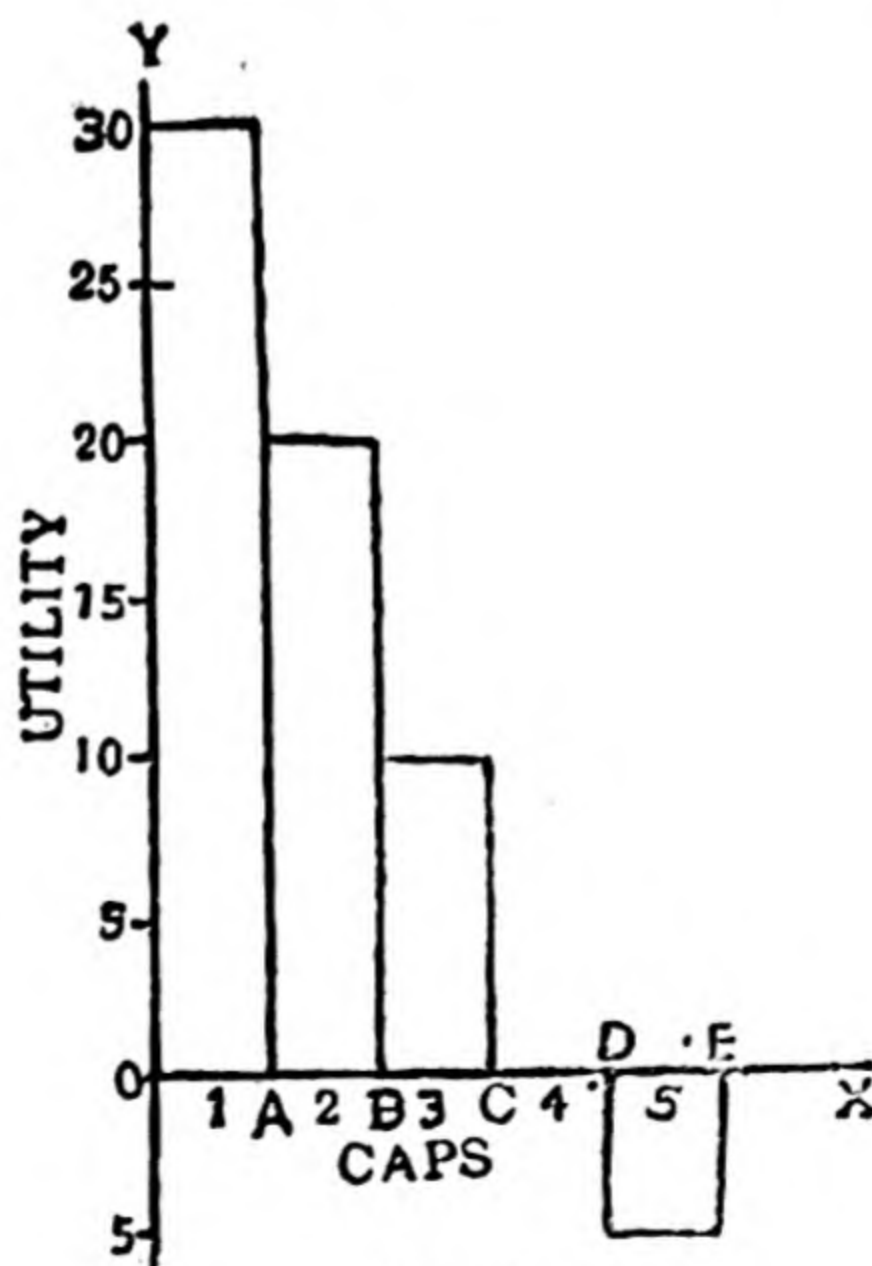


Fig. 18.



consumption of the marginal unit gives some satisfaction, the marginal utility is *positive*; when it neither gives satisfaction nor causes any dissatisfaction, the marginal utility is said to be *zero*; whereas if it causes some dissatisfaction or yields disutility, the marginal utility is *negative*. The marginal utility is positive before the point of satiety is reached ; at the point of satiety, the marginal utility becomes zero; after that point, it actually becomes negative. We can explain this by the following illustration :

Maunds of Wheat		Utility	
1	..	100	} Positive
2	..	80	
3	..	60	
4	..	25	
5	..	10	
6	..	0	Zero
7	..	-20	Negative

In the table the utility of various maunds of wheat is given. Each unit becomes the marginal unit when it is the last unit consumed; and its utility becomes marginal utility. Marginal utility is positive up to the fifth maund of wheat. It drops down to zero if the sixth maund is purchased. If the seventh maund is also purchased, the marginal utility becomes negative—it gives disutility.

If the reader refers to Fig 14 given on p. 100, he will observe that so long as the curve does not touch OX, it appears above the OX axis, which shows that its marginal utility is positive. It touches the OX axis at P where its marginal utility vanishes, *i.e.*, it becomes zero. After that the curve goes below the OX axis showing that the marginal utility thereafter becomes negative.<sup>1</sup>

### Marginal Utility and Law of Diminishing Utility

In the statement of the law of diminishing utility, we were all along considering the *marginal utility*. According to that law, the utility of each successive unit goes on diminishing as consumption is continued. This “successive” unit is the “final” or the “marginal” unit at that particular moment. As such, we can otherwise describe the law as follows. *The marginal utility of a commodity goes on diminishing as its consumption increases, other things remaining the same.* The law of diminishing utility is sometimes called the *law of diminishing marginal utility* for the sake of clarity and precision.

## § 2. TOTAL UTILITY

### Meaning of Total Utility

**Definition.** *The sum total of the utilities of all the units of a com-*

<sup>1</sup> The above is the example of a divisible commodity. In order to study the case of an indivisible commodity, we might refer to the example given on p. 101 in the footnote. It will be seen from Fig. 15 which represents this example that the utility of the first three units is positive as the rectangles appear above OX. There is no rectangle with respect to the fourth unit, which shows that it does not yield any utility. Rectangle concerning the fifth unit goes down the line OX, showing that the utility becomes negative.



*modity consumed at a particular time, is known as Total Utility.* If you eat five oranges at a time, the sum total of the utilities of all the five oranges will be the total utility of the oranges. If, of the five oranges consumed, the utility of the first unit of orange is 100, of the second 80, of the third 60, of the fourth 20, and of the fifth 10, then the total utility of oranges will be  $(100+80+60+20+10=)$  270.

As we consume more and more of a commodity, the total utility derived from its consumption goes on increasing; but this increase takes place at a diminishing rate (or less than proportionately) because of the operation of the law of diminishing utility. For instance, if the utility of the first unit of orange is 100, the utility of the second unit will be only 80 ; so that when two units are consumed, the total utility comes to 180 only, and not to 200 which is the corresponding proportionate figure.

Oranges	Marginal Utility of Oranges	Total Utility of Oranges
1	100	100
2	80	180
3	60	240
4	20	260
5	10	270
6	0	270
7	-20	250

According to the above table of the utility of oranges, if only one orange is purchased, we get 100 units of marginal utility and since it is the only unit consumed, the total utility is also 100. If the second orange is also consumed, then 80 units of utility are added to 100 units of utility given by the first orange, the total utility thus coming to 180. Calculations thus made are shown in the above table.

An important thing which you must have noticed in the above table is that the total utility goes on increasing till the arrival of the point of satiety. When the point of satiety is reached, the total utility remains the same as before—nothing is added to it nor anything is deducted from it. After the point of satiety is reached, total utility begins to fall.<sup>2</sup>

### § 3. TOTAL UTILITY AND MARGINAL UTILITY

It is interesting to learn the relation between marginal utility and total utility at this stage. So long as the point of satiety is not reached, marginal utility goes on diminishing while the total utility goes on increasing though at a diminishing rate. At the point of satiety, the marginal utility becomes zero but the total utility becomes maxi-

<sup>2</sup> The reader should remember that total utility is not taken into account while discussing the law of diminishing utility. The latter is concerned only with marginal utility. It is the marginal utility of a commodity, which goes on diminishing as the stock of that commodity goes on increasing.



mum, full satisfaction having been achieved. *Hence it is said that when marginal utility is zero, the total utility is at its maximum.* After the point of satiety is reached, the marginal utility becomes negative and the total utility begins to fall. If the reader refers to the table given above, he will be able to understand the relationship between total utility and marginal utility quite easily.

### **Marginal Utility, Total Utility and Demand**

We have seen above that as we consume more and more units of a commodity, the marginal utility of that commodity goes on declining while the total utility goes on increasing *up to a certain point.* During this time, what is the effect on demand?

It is clear that as consumption is continued, our demand for successive doses goes on declining. This is for the obvious reason that demand depends upon marginal utility; and as marginal utility declines, demand also goes down. As such, as we consume more of a commodity, our demand for it goes on declining along with a decline in its marginal utility.<sup>3</sup>

### **Role in Determining Price**

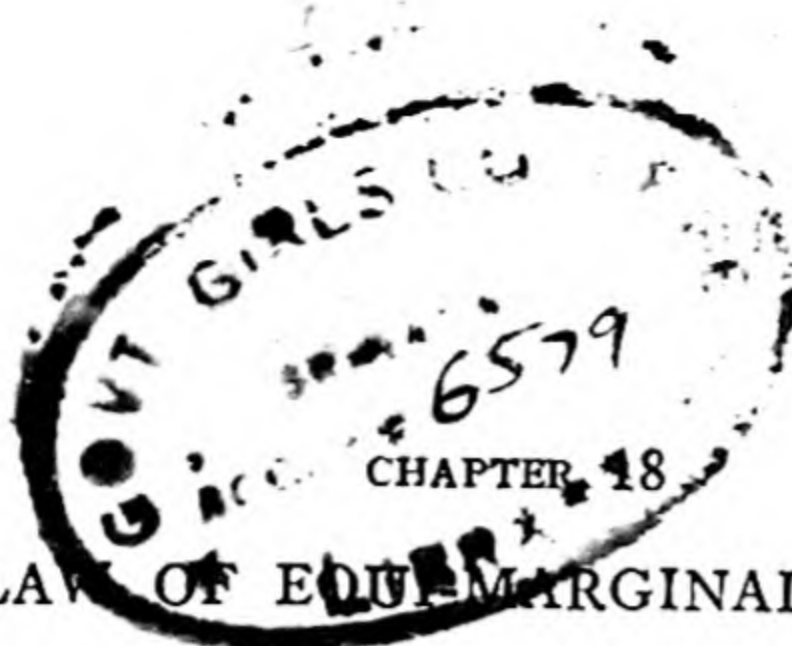
We have seen the distinction between marginal and total utility. When we discuss the problem of the determination of price under "Exchange", we will find that price depends upon (i) utility and (ii) cost. Which is *this* utility which determines price? Is it marginal utility or total utility? Obviously, it is the marginal utility. For the price that a man is prepared to offer per article is equal to the utility of the last unit he intends to purchase, *i.e.*, marginal utility. Total utility is irrelevant in this connection. This is really a problem of theory of value and will be discussed in detail under Exchange.<sup>4</sup>

### **INTERMEDIATE QUESTIONS**

1. What is utility? Distinguish between total, marginal and equi-marginal utility. (Poona, I. A., 1949).
2. Write a short note on Marginal Utility. (Poona, Inter. Com., 1950).
3. Distinguish between Total Utility and Marginal Utility. (Poona, I. Com., 1949).
4. Distinguish between Total Utility and Marginal Utility. Can you use this distinction to explain why very useful things (say water) are generally free and far less useful things (say beer) are expensive. (Punjab, Inter., 1949).
5. Do you agree with the statement: "Total Utility always increases at diminishing rate up to marginal point"? Give arguments to support the answer. (Raj., I. Com., 1953).

<sup>3</sup> See Chapter on *Demand* under "Exchange."

<sup>4</sup> See Chapter on *Theory of Value* under "Exchange."



# THE LAW OF EQUI-MARGINAL UTILITY

The utility analysis is nothing more than a schematic and very abstract account of the process of making these choices.—*Davenport.*

## § 1. STATEMENT OF LAW

### Definition of Law

Man's income is ordinarily limited while his wants are innumerable. His income suffices to satisfy some, but not all, of his wants; and he tries to spend it in such a way as to obtain the greatest amount of pleasure and satisfaction. A man makes this endeavour almost instinctively and without any conscious effort on his part. This he does by arranging the various articles required by him in order of their utility; and by spending money on them in that order—the article affording the greatest utility (in return of a unit of money) coming first, and the one yielding the smallest utility (in return of the same unit of money) coming last. If a man spends his money strictly in this order, he will discover in the end that the utility of the last unit of money that he spends on various objects is, more or less, equal. This gives rise to the *Law of Equi-marginal Utility*. It may be stated as follows: *Maximum satisfaction out of the expenditure of a given sum can be obtained if the utility derived from the last unit of money spent on each object of expenditure is, more or less, the same.*

### Illustration

Let us illustrate the law by a concrete example. Suppose a man goes to the market with Rs. 4 in his pocket, which he wants to spend on oranges, caps and milk, and the utility he expects to derive from each unit of four annas spent on the various heads is as follows :

4-anna Units	Utility derived from the 4-anna unit spent on		
	Oranges	Caps	Milk
1st	10	13	11
2nd	8	12	9
3rd	7	10	6
4th	5	8	5
5th	4	6	4
6th	3	4	2
7th	2	3	1



The purchaser will spend the first unit of four annas on the object which will give him the greatest satisfaction. In this case the cap is such an article—the utility of its first unit is 13 which is maximum. Guided by the same motive, he will spend the second unit on the second cap. The third unit will be spent by him on milk ; and the fourth on oranges. In this way he will go on spending money. The following table indicates the order in which he will spend the four rupees he has got with him :

4-anna Units	Object of Expenditure	Utility Derived
1st	Cap	13
2nd	Cap	12
3rd	Milk	11
4th	Orange	10
5th	Cap	10
6th	Milk	9
7th	Orange	8
8th	Cap	8
9th	Orange	7
10th	Cap	6
11th	Milk	6
12th	Orange	5
13th	Milk	5
14th	Orange	4
15th	Cap	4
16th	Milk	4
Total Utility Derived from Rs. 4		117

The above table shows that he will spend 5 units of four annas on oranges, 6 on caps, and 5 on milk, and will in total derive 122 units of utility. This is the maximum satisfaction that he can obtain out of his expenditure. If he does not follow this scheme of expenditure, he will not be able to derive this much of total utility. For instance, if he spends 6 units on cap, only 3 units on oranges and the remaining 7 units on milk, the total utility he will derive will come to  $(13+12+10+8+6+4+10+8+7+11+9+6+5+4+2+1=)$  116 units only. Other variations may be tried by the reader : the result will be the same.

If you closely mark the first table, a remarkable fact will impress you at once, the fact that the utility derived from the last unit of money spent on each head is equal, *viz.*, 4. The expenditure of money on various heads in order of utility brings about this result. It has, therefore, been formulated that if we want to derive maximum satisfaction out of our expenditure, we should spend our money in such a way as to derive, more or less, the same satisfaction from the last unit of money spent on each head. This is the *Law of Equi-marginal Utility*.

#### Diagrammatic Representation

The Law of Equi-marginal Utility can be represented by a

diagram. The above example can be represented as below :

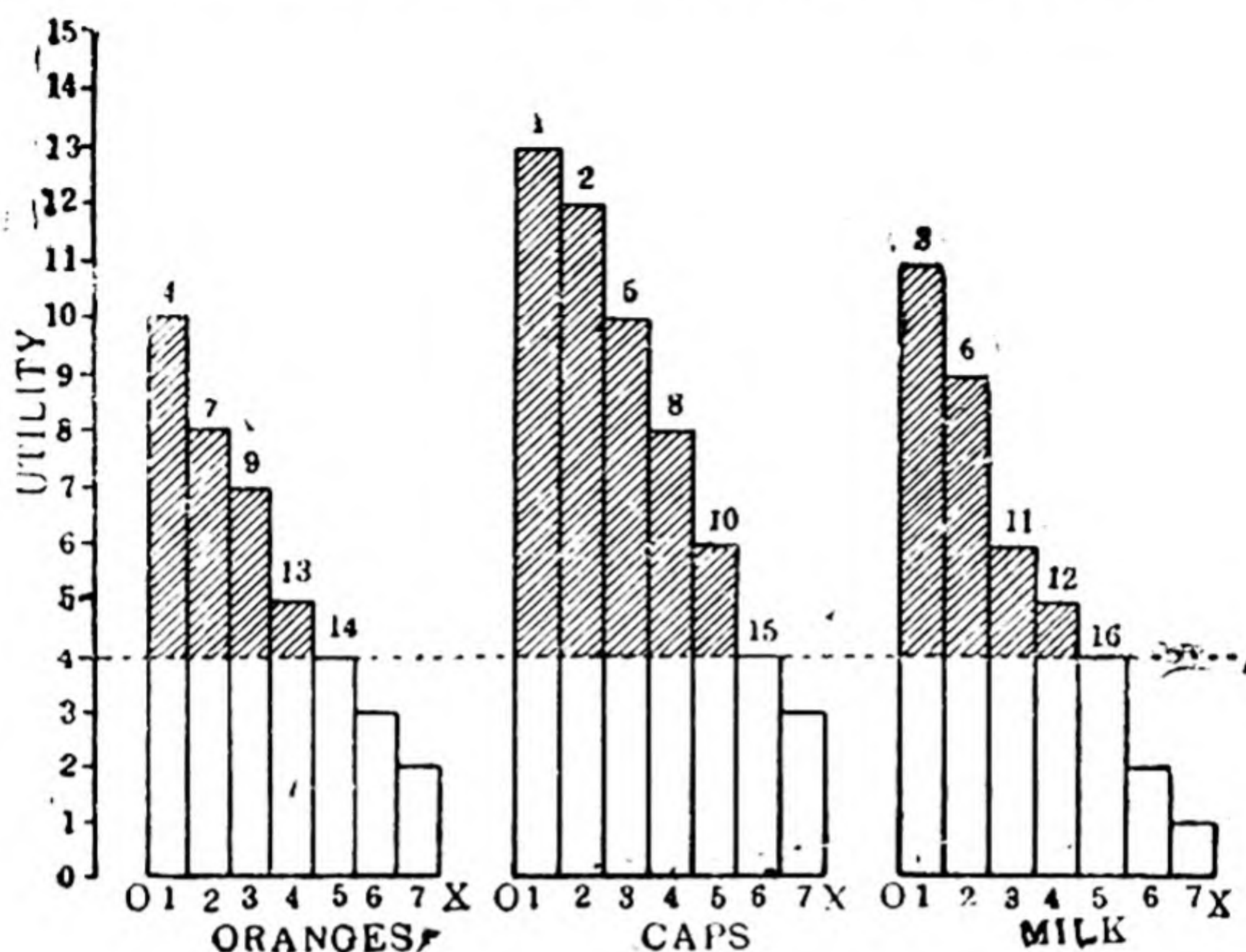


Fig. 19. Illustrating the Law of Equi-marginal Utility.

(Figures above rectangles represent the order in which the 4-anna units are spent).

The three sets of rectangles represent the utility derived from the expenditure of 4-anna units on oranges, caps and milk respectively. OX axis has been divided in each case into equal parts representing successive units of money spent on the particular item; and the rectangles standing over them represent the utility derived. The dotted line is the line of 4-annas utility. So many 4-annas are spent on each item as the rectangles cut and touched by this line. The portion of rectangles standing above this line (shaded in the diagram) represents the Consumer's Surplus. This can be made maximum only if the above order of expenditure is followed.

## § 2. OTHER STATEMENTS OF THE LAW

### Law of Substitution in Consumption

The Law of Equi-marginal Utility is also known as the Law of Substitution in Consumption. It is so called because, according to it, we substitute the commodity yielding greater satisfaction for the commodity yielding less satisfaction. This sort of substitution is, however, not confined to consumption; for it is practised in production, exchange, distribution and public finance as well. Therefore, we call this law, "Law of Substitution in Consumption" in order to suggest that we are speaking of it in connection with consumption.



### Marshall's Generalised Statement

We have stated the Law of Equi-marginal Utility above in terms of monetary units, but it can also be stated in terms of the units of the commodity that is consumed. We should distribute the various units of a commodity over its different uses in such a manner that the utility yielded by the last unit in each case is nearly the same. In other words, the marginal utility derived from its different uses should be nearly the same. This would maximise the satisfaction that we get by consuming a commodity. From this point of view, Marshall states this law in more general terms as follows: "If a person has a thing which can be put to several uses, he will distribute it among these uses in such a way that it has the same marginal utility"<sup>1</sup>.

### § 3. SCOPE AND IMPORTANCE OF THE LAW

The Law of Equi-marginal Utility is of very great significance. It is not only important in the sphere of consumption, but also in other departments of Economics.

#### Importance of Law in Consumption

The great advantage in following this law is that the consumer is able to derive maximum satisfaction from given resources. The consumer can apply this law in (a) spending money, (b) making use of a commodity, (c) apportioning money income over present and future uses, and (d) allocating a commodity over present and future uses.

(a) *Expenditure of Money.* We have already explained above how a person can obtain maximum satisfaction out of the money that he spends by following this law. He has only to take care that the utility derived from the last unit of money spent on each head is nearly the same.

(b) *Use of Commodities.* This law can be made to apply to a commodity which has several uses. For instance, if we have 20 yards of cloth, we can use it for the preparation of shirts or under-wears or *kurtas* or caps. The wise course will be to distribute cloth on these various uses in such a manner as to derive, more or less, the same utility from the last unit of cloth devoted to each purpose.

(c) *Present and Future Use of Money.* The whole of one's income is not usually spent always on the satisfaction of one's present wants; because one likes to save something for the future. The question that has to be faced is as to how much of one's income should be saved and how much spent away. According to the Law of Equi-marginal Utility, one should apportion one's income over saving and spending in such a way that the satisfaction yielded by the last unit of money in each case is, more or less, the same. This would enable one to earn maximum satisfaction.

(d) *Present and future use of a Commodity.* Sometimes a person uses only one part of a commodity, and sets aside another part for being used in future. Here, again, he should work according to the Law of Equi-marginal Utility. He should distribute the whole

<sup>1</sup> Marshall, *Principles of Economics*, p. 119.



volume of the commodity over present and future uses in such a manner that the satisfaction yielded by marginal unit in each case is, more or less, the same.

### Importance of the Law in Other Divisions of Economics

The law of equi-marginal utility is very important in Consumption, as can be gathered from the above account. It is, however, not confined in its application to this branch of Economics alone. It is equally important in the field of *Production* where the producer is advised to substitute a cheaper factor of production for a dearer one. For instance, if machinery is cheaper than labour, it is substituted for the latter. It is known as the Law of Substitution in Production. In *Exchange*, again, purchasers purchase the articles which give them greater satisfaction for the same price and thus try to follow this law. In the sphere of *Distribution* as well, the law has an important bearing. The theory of equal distribution of wealth, which is the basis of socialistic and communistic movements, is fundamentally based on this law. Finally, in *Public Finance* it is the guiding principle in the matter of revenue and expenditure. The applications of the law in the different branches of Economics will receive fuller treatment as we proceed further in our studies.

### § 4. HINDRANCE TO THE LAW

A man by temperament tries to derive maximum benefit from his expenditure and, therefore, tries to follow this law, consciously or unconsciously. There are, however, certain forces and factors which hinder the operation of this law in practical life. *Firstly*, a man may not be able to find out the utility he may derive from the expenditure of various units of money spent on various heads. This may be due to ignorance or due to the absence of calculating habit. *Secondly*, even if he does not suffer from this deficiency, he may not like to do it through carelessness or because he may think that all this calculation is not worth the trouble involved. *Thirdly*, even if all this calculation is done, the market price of different commodities may change and upset his entire calculation. He may well assume that the price of mangoes will remain 12 annas a dozen and that of oranges 6 annas a dozen, but he may actually find that the price of both of them has drastically changed<sup>2</sup>. *Finally*, customs and fashions also sometimes hinder its operation. This point we have discussed in detail below. The practical operation of this law is, as such, interfered with by the above intruding factors, though it obtains in actual life with substantial vigour.

### Effect of Customs and Fashion on the Law

Sometimes it is said that customs and fashion have an effect on the operation of the law of equi-marginal utility. This statement requires close examination.

Customs sometimes make the consumption of an article com-

<sup>2</sup> If the price rises, the amount of commodity that can be purchased for a unit of money will decrease and marginal utility of that commodity will follow suit. Opposite results will happen in the case of decrease in price.



pulsory. It may be that the consumption of that article affords little satisfaction to an individual and, according to the law of equi-marginal utility, he will like to consume another article in its place, so as to get greater utility. But customs might be so strong that he may not dare do so. In that case he may not be able to follow the law of equi-marginal utility. For instance, in a religious ceremony, a Hindu has to pay a certain amount, in the shape of Dakshina and otherwise, to the priest. If he were to spend that sum on the purchase of, say, cloth or sweetmeats, he would get greater satisfaction. But the force of custom is so strong that this cannot be done. The law of equi-marginal utility is thus interfered with.

If a man follows a fashion against his wish, the same result would follow, *i.e.*, the law of equi-marginal utility will be disturbed. A college student may not like to buy a tie but to purchase butter instead but it may be a fashion to have at least one or two ties and he might have to purchase a tie. In this case, he would spend money on an article which gives him less satisfaction and not on the other which would yield greater satisfaction. This would be against the law of equi-marginal utility.

It should be clearly remembered, however, that the law of equi-marginal utility will be disturbed in practice *only if one has to follow a custom or a fashion forcibly and against his wish*. If a man respects a custom or fashion, it means that expenditure according to either of them gives him considerable satisfaction in accordance with the law of equi-marginal utility.

In actual practice in this country, people are forced to observe customs; but most of them willingly follow fashion. This applies at least to educated persons. We can, therefore, say that in actual practice while custom interferes with the law of equi-marginal utility fashion does not disturb it. But this statement is true in a very general sense and applies to educated persons only.

### INTERMEDIATE QUESTIONS

1. (a) Explain the economic principle on which a person should spend his resources over different wants. (b) If the last anna which a person spends on  $x$  gives him more satisfaction than the last anna he spends on  $y$ , how should he readjust his expenditure? (*Bom ay, I. Com., 1949*).
2. State and explain the law of equi-marginal utility. How does it help us in our everyday expenditure? (*Madhya Bharat, I. A., 1952*).
3. Explain and illustrate the application of the law of substitution in spending income. (*Patna, I. A., 1950*).
4. Explain with examples the principle of equi-marginal utility. (*Patna, I. A., 1942*).
5. Explain the principle of equi-marginal utility. (*Patna, I. Com., 1948 S*).
6. State and explain the Law of Equi-marginal Returns. (*Poona, I. Com., 1950*).
7. If you were suddenly to receive a legacy of two lacs of rupees, what principle would you bear in mind in regulating your disposal of that sum so as to derive maximum satisfaction from that disposal. Mention some of the im-

portant uses to which you will put that money and the relative importance that you attach to them. (*Punjab, Int.*, 1948).

8. State and explain the Law of Equi-marginal Utility. How does it guide the day-to-day expenditure of a person? (*Raj., I. A.*, 1948).

9. Is it a fact that wants increase more rapidly than income? If so, what steps would you take to balance the two? (*Raj., I. Com.*, 1946).

10. Explain and illustrate the Law of Equi-marginal Utility. What is its importance in consumption? (*Utkal, I. Com.*, 1950 S).



*me*

## CHAPTER 19

# CONSUMER'S SURPLUS

Only where the stage has been reached of possible effect of some choice on the direction of expenditure, can there be anything in the nature of a real surplus of satisfaction for the consumer.—*Taussig*.

### § 1. MEANING OF CONSUMER'S SURPLUS

✓ *Explanation.* When we purchase a commodity for consumption, we hope to gain some utility by consuming it ; at the same time, we lose some utility in the shape of the price we pay for it. In the beginning, the utility thus gained happens to be more than the utility thus lost ; and we usually go on purchasing a commodity so long as the utility derived continues to exceed the utility lost. The utility derived from successive units of a commodity, however, goes on diminishing by and by and sooner or later the utility derived equals the utility lost, at which point we stop our purchases. It will be unwise to push purchases beyond this stage since we now stand to lose more utility than what we can gain.

Now, in the case of each unit purchased, except the last one we have derived more utility than what we have lost. The surplus utility or satisfaction, which is thus acquired by the consumer, is known as the 'Consumer's Surplus'.

✓ *Definition.* Consumer's surplus can be defined as follows : *Consumer's Surplus obtained by a person from a commodity is the difference between the satisfaction which he derives from it and that which he foregoes in order to procure that commodity.*<sup>1</sup>

*Another Definition.* The satisfaction that a consumer obtains from the consumption of an article may be measured by the price he would pay for it rather than go without it; while the satisfaction he loses in procuring a commodity is measured by the price he actually pays for it. As such, consumer's surplus is sometimes defined as *the excess of what a consumer would pay over what he actually pays*.

### ✓ Further Explanation

The concept of consumer's surplus can be explained by four definite statements which are joined to one another connectively. They are as follows : (1) That we derive greater utility from the earlier units and less from the later units. (2) That the price that we pay for each unit remains the same, for the same price is paid for each unit of a commodity in a market. (3) That we stop our purchases when the utility of the thing purchased equals the price paid for it. (4) Hence in the case of all the units, except the last one, a surplus of utility shows itself, which is called consumer's surplus.

1 J. K. Mehta, *Groundwork of Economics*, p. 52.

When we purchase several units of a commodity, the utility of each unit (except the last) exceeds the utility of the last unit. The utility of the last unit purchased can be measured by the price paid per unit. It follows, therefore, that the utility of each unit of the commodity (except the marginal unit) is greater than the money paid for it ; in other words, a purchaser derives a surplus utility from the purchase of all the units except the last one. This surplus utility is known as consumer's surplus.

### Mathematical Formula

Consumer's surplus is mathematically expressed as follows :

$$\text{Consumer's Surplus} = \text{Total Utility} - (\text{Marginal Utility} \times \text{No. of Units Purchased})$$

$$\text{or } C.S. = T.U. - (M.U. \times n)$$

Where T.U. is Total Utility, M.U. is Marginal Utility, and  $n$  is the number of units purchased. We can substitute price ( $p$ ) for Marginal Utility (M. U.) in the above formula.

### Illustration

Suppose a man goes to the market, with 5 annas in his pocket with a view to purchase some oranges. He thinks that the utility of the first orange will be equal to 30 annas ; of the second 20 annas ; of the third, 10 annas ; of the fourth, 5 annas ; of the fifth, 1 anna ; and of the sixth, zero. In the market the price per orange is, say, one anna. Now he will purchase the first four oranges without any hitch because the utility of each of them exceeds one anna which he will have to pay per unit. He will also purchase the fifth orange ; he will derive one anna worth of utility from it, which is also its price ; but he will stop his purchases at this point. In this case, then, he will derive the consumer's surplus as shown in the following table :

No. of Units	Utility per Unit	Consumer's Surplus per Unit
I	30 annas ..	30—1=29 annas
II	20 „ ..	20—1=19 „
III	10 „ ..	10—1= 9 „
IV	5 „ ..	5—1= 4 „
V	1 anna ..	1—1= 0 „
Total Consumer's Surplus		61 annas

In the case of the first orange, he derives utility worth 30 annas, but he pays only one anna for it. The surplus utility in this case is 29 annas. In the case of second orange similarly consumer's surplus is 19 annas ; and so on. The total surplus is 61 annas. This is the consumer's surplus.



### Diagrammatic Representation

The concept of consumer's surplus illustrated in the above example is represented diagrammatically below :

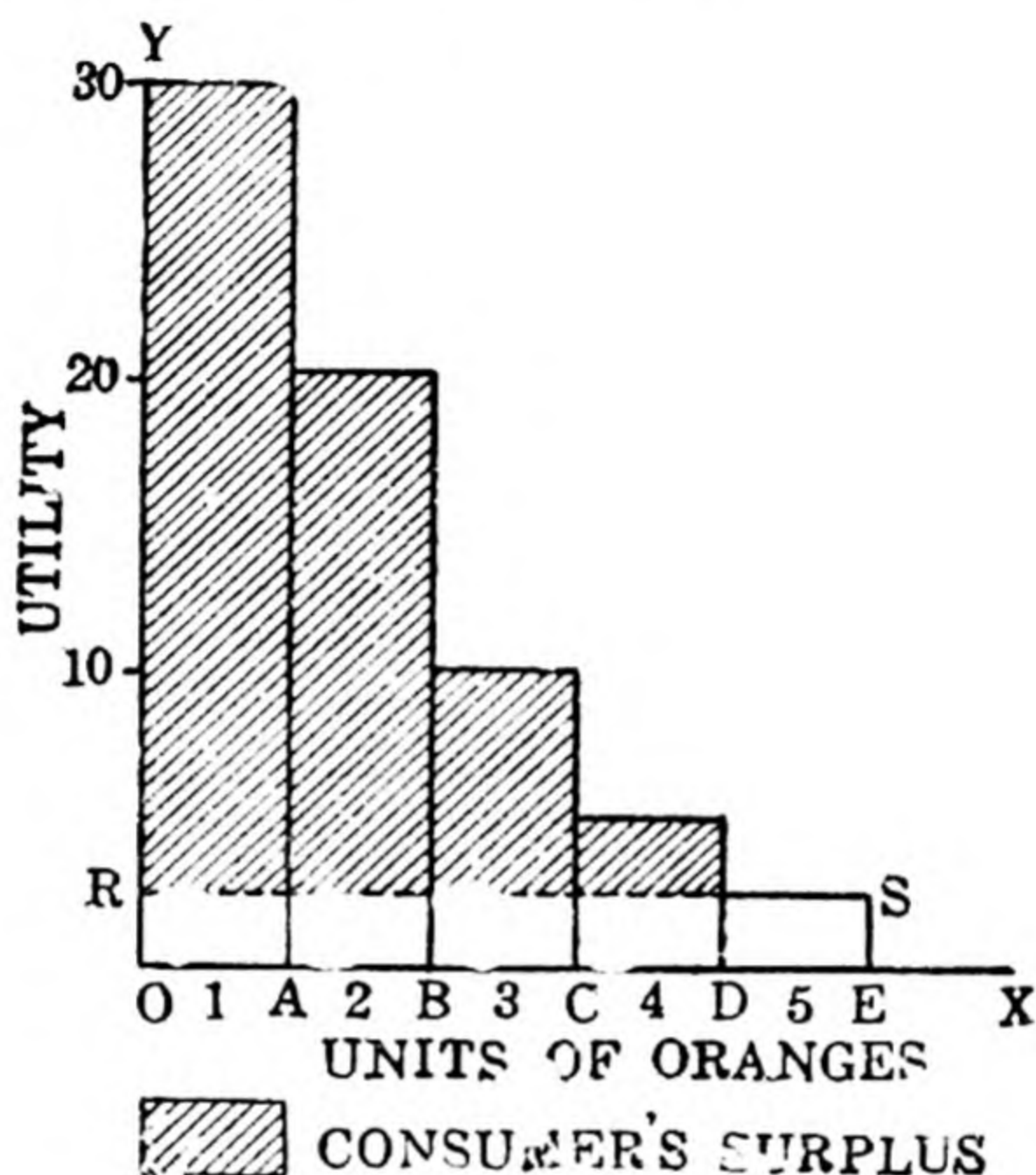


Fig. 20. Illustrating the Consumer's Surplus.

(The shaded portion represents consumer's surplus).

In the diagram oranges are represented by OX—axis and the utility along OY—axis. OX—axis is divided in OA, AB, BC, CD and DE, each division representing one orange in order. The rectangle standing over each of them represents the utility that each of them yields. The line RS measures the price per orange. The portion of each rectangle standing above this line represents the surplus utility. This portion is shaded in the diagram. This entire shaded portion represents the consumer's surplus<sup>2</sup>. The marginal unit does not yield any consumer's surplus.

### Marshall's Explanation

In explaining the idea of consumer's surplus, Marshall, who is the father of this concept, mentions that the price which a person pays for a thing can never exceed, and seldom comes up to that which he will be willing to pay rather than go without it ; so that the gratification which he gets from its purchase generally exceeds that which he gives up in paying away its price and he thus derives from the purchase a surplus of satisfaction. The excess of price which he would be willing

<sup>2</sup> If we substitute a divisible commodity, say milk, for oranges which are

to pay rather than go without that thing over that which he actually pays, is the economic measure of this surplus satisfaction. It has some analogy to rent, but is perhaps best called consumer's surplus.

It is obvious that the consumer's surplus derived from some commodities is much greater than that from others. There are many comforts and luxuries of which the prices are very much below those which many people would pay rather than go entirely without them ; and which, therefore, afford very great consumer's surplus. Good instances are matches, salt, a one-anna newspaper, and a postage stamp.<sup>3</sup>

## § 2. CALCULATION OF CONSUMER'S SURPLUS

We have given above a simple formula for calculating consumer's surplus, which is as follows :

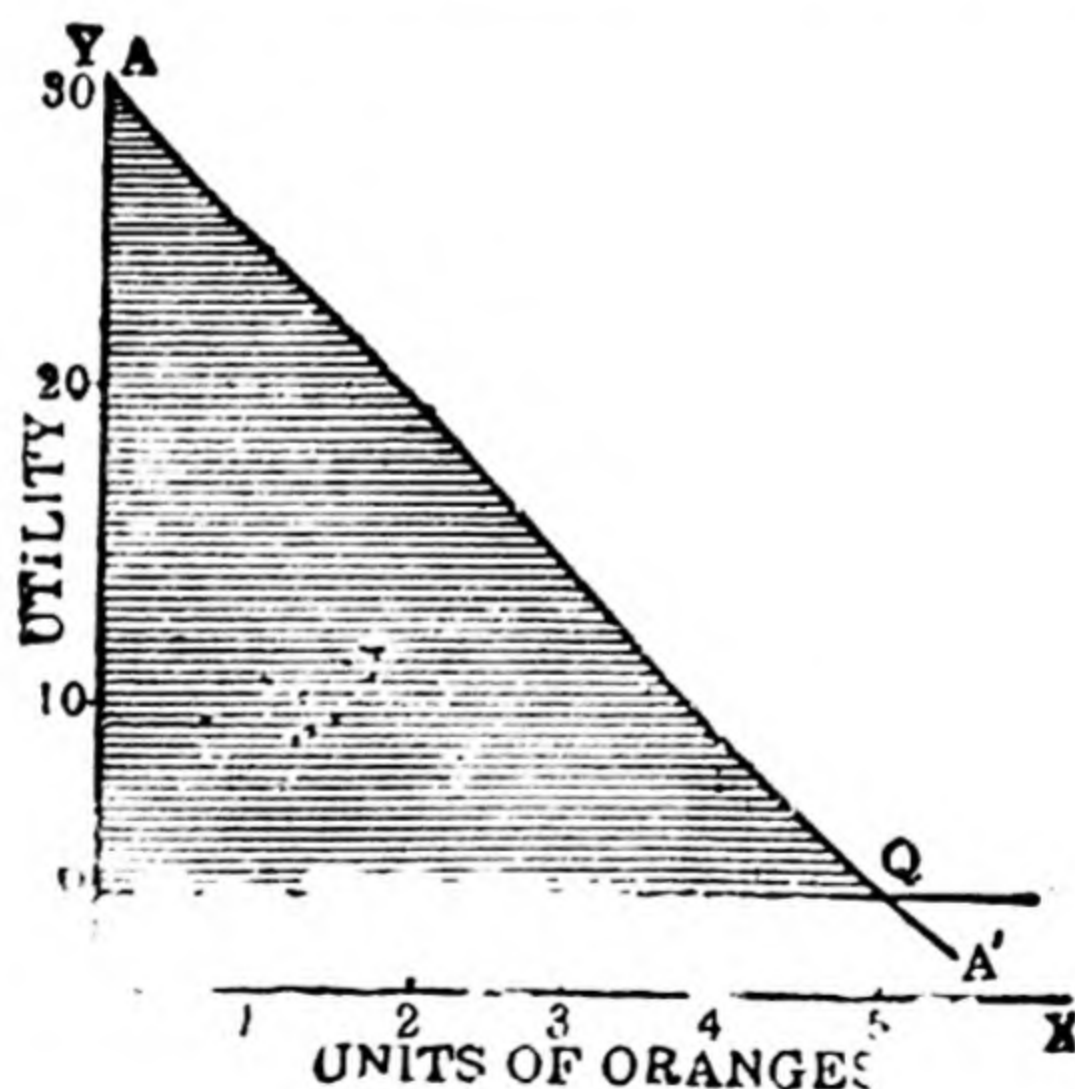
$$C. S. = T. U - (p \times n)$$

In the following illustration, we will calculate consumer's surplus according to this formula.

### Illustration 1

Suppose a person purchases seven yards cloth at Re. 1 per yard ; and the utility of successive yards to the purchaser is as follows : Rs. 20, Rs. 18 Rs. 15, Rs. 13, Rs. 10, Rs. 5 and Re. 1. Calculate consumer's surplus obtained by him.

invisible, our diagrammatic representation will be in the form of a curve as shown here :



AA' curve is the utility curve. PQ line represents the price paid for five units of milk. The shaded area is the consumer's surplus.

3 Marshall, *Principles of Economics*, p. 124. This benefit, Marshall continues, may be called the benefit which he derives from his *opportunities*, or from his *environment* ; or to recur to a word that was in common use a few generations ago, from his *conjuncture*. *Ibid.*, pp. 124-25.



**Solution of Illustration 1**

$$\begin{aligned}
 C. S. &= T. U. - (p \times n) \\
 &= Rs. 20 + 18 + 15 + 13 + 10 + 5 + 1 - (Rs. 1 \times 7). \\
 &= Rs. 82 - 7 \\
 &= Rs. 75.
 \end{aligned}$$

**Illustration 2**

A well-to-do student has five shirts which yield utility as follows : Rs. 100, Rs. 60, Rs. 50, Rs. 30, and Rs. 10. The price per shirt is Rs. 10. Calculate consumer's surplus.

**Solution of Illustration 2**

$$\begin{aligned}
 C. S. &= T. U. - (p \times n) \\
 &= (Rs. 100 + 60 + 50 + 30 + 10) - (Rs. 10 \times 5) \\
 &= Rs. 250 - Rs. 50 \\
 &= Rs. 200
 \end{aligned}$$

**§ 3. IMPORTANCE OF CONSUMER'S SURPLUS**

The idea of consumer's surplus is of enormous importance in Economics both from theoretical as well as practical points of view.

**Theoretical Importance**

(1) The theoretical importance of this concept lies mainly in the fact that it reveals what substantial benefits we unconsciously derive from our surroundings or environment in daily life. When we purchase a newspaper, we pay only 2 as for it; similarly, we pay only 3 pice for a match-box. Hardly do we realise that the utility of these things is so great that we may be willing to pay, say even Rs. 10, for each of them rather than go without them. Consumer's surplus derived from newspaper is, then, equal to Rs. 9-14-0 and that from match-box Rs. 9-15-3.

(2) This concept makes the difference between value (or value-in-exchange) and utility (or value-in-use) very clear. The value of salt, match-box and newspaper is very small but their utility is very great.

**Practical Importance**

(A) *Comparative Satisfaction Derived by Different Classes.* People receive their income in the shape of money. But their real income should be calculated in terms of satisfaction which they derive by spending their monetary income. Therefore, in comparing the income of a person with that of another, we should try to pay attention to real income or satisfaction derived from money income. An idea of real income or satisfaction derived from money income can be had with the help of consumer's surplus. Therefore, if we want to calculate the real income of the same class of persons in two countries, we should try to calculate the consumer's surplus enjoyed by them. Suppose an Indian is getting only Rs. 100 per month in India while he can earn Rs. 200 in Australia. Now, it is possible that Rs. 100 in India may afford greater consumer's surplus than Rs. 200 in Australia. In such a case he will enjoy greater satisfaction by continuing to live in India. In the same manner, we can get an idea of the economic posi-



tion of the same class of people in the same country at different times by calculating the consumer's surplus enjoyed by them.

✓(2) *Imposition of Taxes.* The Government of every country has to collect revenue by imposing taxes. But it makes every endeavour to impose only such taxes which might yield substantial revenue to cause as little harm to the people as possible. In both these respects the concept of consumer's surplus is of very great help, because with its help the possible effects of different taxes on people can be calculated. When a tax is levied, the price of the article generally rises. Since consumer's surplus is the excess of the price that a man can pay over the price that he actually pays for a commodity, a tax equal to this entire surplus can be imposed. The loss of consumer's surplus due to the imposition of various taxes can be calculated; and the Government can then choose those taxes which cause the least injury to the consumer's surplus in proportion to their yield.

✓(3) *Fixation of Price by a Monopolist.* The sole seller of a commodity is called a monopolist. He can easily earn maximum profit because he is the only seller in the market. In this consumer's surplus is of great help to him. He can keep the price of his commodity so high that no consumer's surplus is left. This, however, is an extreme case, and in practice the monopolist does not do so for fear of public resentment and Government's disapproval. But he can have an idea from the amount of consumer's surplus left with the consumers at different prices as to which price will give him maximum possible profit.

✓(4) *Benefit from International Trade.* How much benefit does a particular country obtain by trading with another country, can be ascertained by calculating the extent by which the consumer's surplus of its inhabitants increases.

#### § 4. CRITICISM OF CONSUMER'S SURPLUS

✓(1) *This Concept is Imaginary and Misleading.* Some economists regard consumer's surplus as fictitious, merely a figment of imagination. Professor Nicholson is of this opinion. He asks the question: What is the use of saying that the real utility of £1,000 in Africa is equal to £100 in England?

This question has been answered by Marshall and Edgeworth by saying that it tells us as to how much benefit does a man derive from his environment. Moreover, if we say that the consumer's surplus derived from £1,000 in Africa is equal to consumer's surplus obtained from £100 in England, then people from England would not migrate to Africa so easily merely because of greater monetary income in that country. It is, therefore, wrong to say that concept of consumer's surplus is fictitious and misleading.

✓(2) *Consumer's Surplus is not Permanent.* It is also said that consumer's surplus from articles of fashion or of luxury is obtained only so long as they continue to be fashionable or costly. If fashionable things go out of fashion or articles of luxury become cheap, the consumer's surplus derived from them will considerably decline. As such, consumer's surplus is not permanent.



But the concept of consumer's surplus has a definite and fixed meaning. That consumer's surplus does not remain of a fixed quantity, is not its defect. In fact, nothing in the world is permanent.

(3) *Consumer's Surplus Obtained from Articles of Existence is Unlimited.* It is also said in criticism of this concept that consumer's surplus yielded by articles for existence is unlimited. For instance, if a millionaire is dying of hunger, he may be prepared to pay even a crore of rupees for a loaf of bread, but he actually pays for it only one anna. Therefore, the consumer's surplus of a loaf of bread will be about a crore of rupees (less one anna). This statement appears to be imaginary and meaningless. Professor Taussig states that this is so in the case of articles which satisfy conventional wants.

This allegation does not seem to be very accurate. It is not true that consumer's surplus is unlimited. It is certainly huge in regard to the articles of existence, but it can be calculated.

(4) *Decrease in the Utility of Different Units with an Increase in Consumption.* Professor Patten is of the opinion that as we consume more units of a commodity, the utility derived from earlier units goes down. Therefore, we cannot measure utility accurately and so also the consumer's surplus. Suppose the utility of the first shirt is Rs. 20, but when we purchase a second shirt the utility of the first shirt goes down to Rs. 18, and if we purchase a third shirt then its utility goes down to Rs. 15. In such a condition we cannot calculate utility accurately.

Some economists, including Professor A. C. Pigou, consider this to be a wrong view. Moreover, this criticism is against measuring utility, and not against measuring consumer's surplus. If utility itself cannot be measured, the question of measuring surplus does not arise.

(5) *We do not also know how much money we will pay for a commodity.* The reason is that in practice we never experience a situation of this nature. Therefore, we cannot say what amount we will be prepared to pay for a commodity rather than forego it. It can only be imagined. Therefore, consumer's surplus becomes purely imaginary.

### INTERMEDIATE QUESTIONS

1. Explain the doctrine of Consumer's Surplus. How far is it possible to measure this surplus in terms of money? What is its practical utility? (Andhra, Inter., 1950).

2. Examine the concept of Consumer's Surplus and discuss how far the surplus is substantial? What is the importance of this concept in Economics? (Bombay, I. A., 1940).

3. Write a short note on Consumer's Surplus. (Bombay, I. Com., 1948).

4. What is Consumer's Surplus? How does it arise? How is it measured? Illustrate your answer with a diagram. (Madhya Bharat, I. A., 1953).

5. State and explain fully the Law of Consumer's Surplus. (Madhya Bharat, I. Com., 1952).

6. Explain the concept of Consumer's Surplus of satisfaction. Can you measure it? (Patna, I. A., 1948 S).

7. Explain the concept of Consumer's Surplus of satisfaction. (Patna, I. Com., 1949).
8. Write a short note on "Consumer's Surplus." (Poona, I. A., 1949).
9. Write a short note on "Consumer's Surplus." (Punjab, Inter., 1949).
10. What is Consumer's Surplus? Explain fully with the help of a diagram. (Raj., I. A., 1952).
11. What is Consumer's Surplus? How is it measured? Why does it arise? (Raj., I. A., 1941).
12. What is Consumer's Surplus? How does it arise? How is it measured? (Raj., I Com., 1951).
13. What is Consumer's Surplus? Explain it with the help of a diagram. (Travancore, Inter., 1943).
14. What is Consumer's Surplus? Show with the help of an illustration how this surplus arises? (Uttal., I. Com., 1949).



## CHAPTER 20

### THE STANDARD OF LIVING

Sanitation in any accepted sense of the word is practically non-existent. The public latrine is too often the bank of a river or the margin of a tank.... Unprotected wells and tanks, unswept village streets, closed, pent up windows excluding all ventilation—in such conditions does the average villager live, and yet observes a remarkably high standard of personal cleanliness and tidiness.—*Linlithgow Report*.

After studying wants and utility, we may now turn our attention to the subject of *Standard of Living*. The quantity and quality of everything that a man consumes is reflected in his standard of living. Standard of living of a person is, as such, the index of his economic progress. On the same reasoning it can be shown that the standard of living of a nation is the true measure of its economic progress. It is, therefore, important to study the subject of standard of living.

#### § 1. STANDARD OF LIVING

##### Meaning of Standard of Living

Everyone of us consumes certain articles of necessity, comfort and luxury. Through long use we become so much accustomed to them that we feel acute pain if we miss them. The articles of necessity, comfort and luxury, to which a man becomes habituated, constitute his standard of living. Otherwise expressed, *standard of living signifies the wants one habitually satisfies*.

It follows from the above that the standard of living is, more or less, a matter of one's habit, and, therefore, does not change quickly and easily. Habit, the so-called second nature of man, does not change soon ; and the standard of living of a person is more or less fixed. It is, however, comparatively easy to raise the standard of living than to lower it.

In our daily life we often hear and talk about standard of living. Usually this term is used in a comparative sense. We occasionally say that the standard of living of an Englishman is higher than that of an Indian, and the standard of an American is superior to that of an Englishman. A higher standard of living signifies the satisfaction of a larger number of, and more wisely selected, wants ; whereas a lower standard of living signifies the satisfaction of few wants which may be unwisely chosen. Obviously, the higher standard of living leads to a richer, fuller and materially happier life, while a lower standard of living results in poor, incomplete and materially inferior life.



## Factors Governing the Standard of Living

It is, therefore, the endeavour of every individual and nation to achieve a high standard of living. But what are the factors on which the standard of living depends? These factors are mainly two: (1) the amount of income spent, and (2) the wisdom with which it is spent. Other things being equal, a rich man is in a position to satisfy a larger number of wants than a poor man and, therefore, has a higher standard of living. Again, of the two persons who have equal incomes, the one who spends his money more wisely will have a higher standard of living than the other.

Evidently excellence or otherwise of the standard of living does not depend *only* on the income of a person; wisdom in expenditure is another important factor. *An expensive standard of living, in other words, is not necessarily a high standard of living.* An illustration may be given to explain this point. Suppose Atma Ram earns Rs. 200 per month whereas Babu Ram earns only Rs. 100 per month. Atma Ram may be a reckless fellow, spending money on thoughtless objects. He may be addicted to drinking, cinema and such other habits which may claim about half of his income or even more. He may spend the rest of his income in a similarly careless fashion—in taking food at hotels, on showy and costly clothes and in consuming cheap luxuries. The quality of his total consumption is obviously inferior; his standard of living will be called rather poor. Babu Ram, on the other hand, may be very wise in his expenditure. He may spend a fair part of his income on healthy and nutritive diet, may live in an open house and may wear clean, tidy and durable clothes. He may also spend something on education and save a little for the “rainy day”. His standard of living is without doubt fairly high. In this illustration, then, though Atma Ram earns twice as much as Babu Ram, still the standard of living of the latter is superior to that of the former; because Babu Ram spends his income very wisely, whereas Atma Ram spends it very carelessly. Therefore, it is wrong to argue that a costly standard is necessarily a high standard. Unless other things are supposed to be equal, an expensive standard must not necessarily be a high standard.

## Importance of a High Standard of Living

In modern times all of us try to maximise our *material welfare*; that is why the present age is often described as the “Age of Materialism”. True to the spirit of the times, individuals and nations believe that a high standard of living is an ideal which should be tried to be achieved and striven for. Whenever any individual finds that he can increase his income and raise his standard of living in some way or the other, he generally tries to make use of the opportunity. Indeed, there are persons who do not even produce children so that they may be able to maintain a high standard of living. As has been wittily remarked, a new couple has to choose between a car and baby; and often the car wins! What is true of an individual is also true of a nation. The modern nations try to harness all the natural resources like waterfalls, forests, mines, fisheries, etc., and use scientific methods of



production to make their people richer than what they are. A nation believing in high standard of living exploits its resources to the maximum degree in the productive operations, thus paving the way for maximum consumption for its members. In fact, a higher or lower standard has become the index of an advanced or a backward nation respectively.

There are, however, certain thinkers who do not attach much value to material progress ; and to them the spiritual advancement, the advancement of soul and mind, is the only worthy ideal to be followed. Such people do not believe in a high standard of living. On the other hand, they stick to the principle of "simple living and high thinking". Mahatma Gandhi and Tolstoy were representative thinkers of this school. From an economic viewpoint, it can be stated by way of criticism that this attitude is not helpful for material progress and does not, therefore, receive the sanction of economists. Even from a broader standpoint this ideal becomes, at its best, merely theoretical. In these days of dire materialism when human blood is spilt more carelessly than water for achieving material objects, no country can hope to keep its head high unless it is materially strong. The younger generation of India does not, therefore, agree with the Gandhian ideal fully.

## § 2. FAMILY BUDGETS

In a preceding chapter we had discussed how a person can derive maximum advantage out of his expenditure by following the law of equi-marginal utility. The pursuit of this object becomes convenient and easy if proper family budgets are maintained; and variations are effected in the nature of expenditure as suggested by the budgets. Family budgets have also other important advantages of considerable and vital economic significance all of which go to make their study an important subject in Economics. They have been collected in various countries of the world and valuable information has been drawn from them from time to time.

### Meaning of a Family Budget

A family budget, it may be stated, consists of a detailed description of the income and expenditure of a family, and has reference to a particular period, a month or a year. It can, therefore, be defined as *a detailed statement of the estimate of income and expenditure of family, relating to a particular period.*

### Form and Contents of a Family Budget

A family budget begins with a mention of the members of the family in question and the annual (or monthly, as the case may be) income thereof. Thereafter are given, in a classified form, the various groups and items of expenditure. The total quantity of each commodity consumed, the price paid, the total amount spent, the percentage that

the amount spent on each head bears to the total income and the remarks, if any, are all given in detail. A rough form follows here.

## BUDGET

*No. of members.....(men, women and children with their ages, to be mentioned).*

*Annual income.....*

Items of expenditure	Quantity consumed			Amount spent		Percentage of expenditure to total income	Remarks
	Quality	In a week or month	Total quantity consumed	Price per unit	Total amount		

The most important group of items of expenditure in a family budget is *food*. The total amount of income spent on food varies from about 50 per cent to about 60 per cent. Clothing is the next important group; about 18 per cent of one's income is spent on this object. *Lodging* claims 12 cent and *Heat and Light* another 5 per cent of one's income. Education, taxation, health and servants are other items of expenditure.

## § 3. ENGEL'S LAW OF CONSUMPTION

Important studies of family budgets have been carried on in various countries of the world. Probably the most important of such studies was made by Dr. Engel in the year 1857 in Saxony (Germany). He divided the families living in Saxony into three classes: the labour class, the middle class and the well-to-do class. The main items of expenditure were classified by him into the following groups: (i) Food, (ii) Clothing, (iii) Lodging, (iv) Heat and Light, and (v) Education, Health and Servants. He tried to find out the percentage of income



spent by each class of families on the various heads. The result of his investigation is presented in the following table<sup>1</sup>:

Items of expenditure	Percentage of its income spent by—		
	Labour class family	Middle class family	Well-to-do family
1. Food ..	60	55	50
2. Clothing ..	18	18	18
3. Lodging ..	12	12	12
4. Heat and light ..	5	5	5
3. Education, health and servants, etc. ..	5	10	15
Total ..	100	100	100

As is clear from the table, Engel discovered that, as the income increases—

- (1) The percentage of it spent on food decreases ;
- (2) The percentage of it spent on clothing, lodging and heat and light remains the same ;
- (3) The percentage of it spent on education, health and servants, etc., increases.

Briefly, it may be stated that *as the income of a family increases, the percentage of income spent on food decreases, that spent on clothing, lodging, heat and light remains unchanged, and that spent on education, health, servants, etc., increases.* This is known as the *Engel's Law of Consumption*.

### Diagrammatic Representation

In Fig. 22 on p. 132, the height of the rectangles shows the percentage of income ; and their width, the amount of income. The first rectangle is the widest and represents the richest family ; the last rectangle is the least wide and represents the poorest family.

The amount spent on food by rich family constitutes only 50 per cent of its income ; that spent by middle class family, 55 per cent ; while that spent by poor family, 60 per cent. The bars are marked likewise. But this does not mean that the total amount of money spent by rich family on food is least ; and that spent by poorest family, the biggest. It cannot be, for though the rich family spends only 50 per

<sup>1</sup> The above table has been simplified from the original given by Engel.

cent of its income on food, that income is very large; as such, this amount is larger than the amount spent by the poor family on the same object. This point can be easily understood from the diagram. The total amount spent on various heads is represented by the divisions of rectangles; and the first division of the rectangles, representing the amount spent on food, is biggest in the case of the rich family. Similar considerations apply to other items of expenditure.

#### § 4. THE IMPORTANCE OF FAMILY BUDGETS

The preparation and the study of family budgets is of supreme importance in Economics. Not only in the field of Consumption, but also in the spheres of Production, Exchange and Distribution, their importance is being realised with increasing force. Family budgets

As the latter has acted as a guide and a standard of comparison to later inquiries and occupies a unique position in Economics, it may be produced below—

Items of expenditure	Proportions of the expenditure of the family of—		
	1	2	3
	Workman with an income of 45/ to 60/ a year	Workman with an income of 90/ to 120/	Middle class person with an income of 1 0/ to 200/
1. Food ..	62-0 p.c.	55-0 p.c.	50-0 p.c.
2. Clothing ..	16-0 p.c.	18-0 p.c.	18-0 p.c.
3. Lodging ..	12-0 p.c.	12-0 p.c.	12-0 p.c.
4. Light & fuel ..	5-0 p.c.	5-0 p.c.	5-0 p.c.
5. Education ..	2-0 p.c.	3-5 p.c.	5-5 p.c.
6. Legal protection	1-0 p.c.	2-0 p.c.	3-0 p.c.
7. Care of health..	1-0 p.c.	2-0 p.c.	3-0 p.c.
8. Comfort and recreation ..	1-0 p.c.	2-5 p.c.	3-5 p.c.
Total ..	100-0 p.c.	100-0 p.c.	100-0 p.c.



have profound importance to householders, economists, statesmen and social reformers alike.

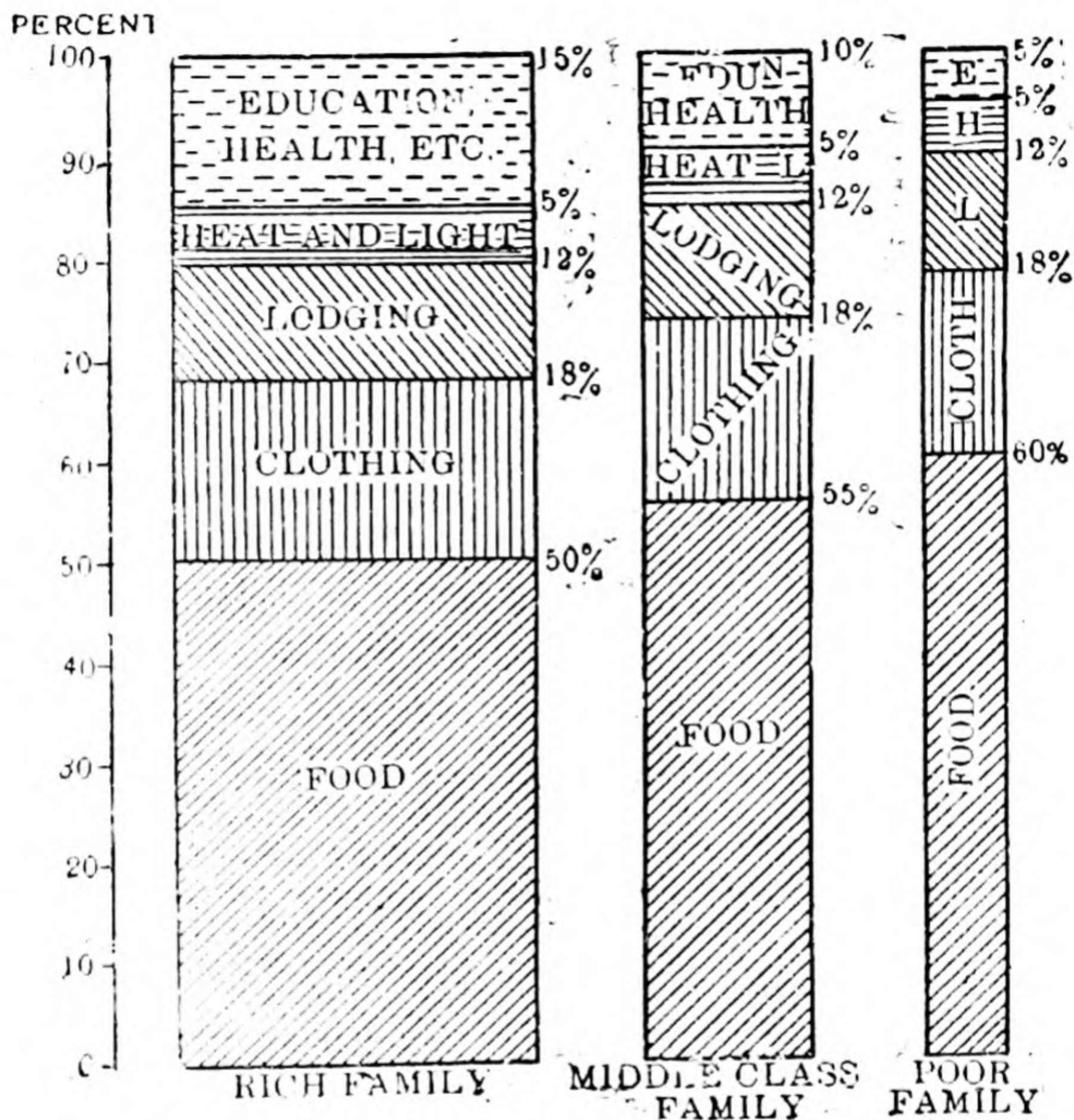


Fig. 22. Illustrating the Engel's Law.

### Importance to Householders

The family budgets help a householder to follow the principle of equi-marginal utility. If he has no family budget, he might spend his income unwisely. For instance, he might spend its major part in such recreations and luxuries as cinema shows, crossword puzzles and other things of like description with the result that adequate amount may not be left for taking care of other important items of expenditure. But if he keeps a family budget, he will at once detect that there is a big amount standing against the item of recreation which can be curtailed with advantage ; and if that sum is spent on other useful objects, he will gain in total utility.

Not only this, it also enables him to distribute his income pro-



portionately between expenditure and saving. He may be spending money so recklessly as to leave very little for contingencies and old age; or he might be saving so much as to lead a life of hardship and misery. If he has a family budget before him, the picture of his present and future requirements will come up before him and he will be in a position to distribute money prudently between expenditure and saving. In these ways and others, family budgets help householders to derive maximum satisfaction out of their income.

### Importance to Economists

Family budgets are useful not only to householders but also to economists inasmuch as an important portion of their study is founded on the bed-rock of family budgets.

(1) The study of family budgets gives an idea about the economic position of the people of a country. It gives definite figures of the quantity and quality of commodities consumed by them and shows the stage of their mental progress. Family budgets enable economists to compare the economic position of different classes of people in the society. They give an accurate idea of the disparity in the financial standing of the poor and the rich and go to make a case for an equitable distribution of wealth and income. Sometimes this comparative study takes into account the economic conditions of the people of two or more than two countries, which bears valuable fruits at times. Comparison of the conditions of the working class in America, England and Japan with those of the working class in India, at the present moment, leads to many important conclusions regarding the connection of income to efficiency, welfare and other sets of economic relationship.

(2) A study of family budgets of a class of persons of a country enables an economist to find out whether the amount is being spent by that class of persons wisely or not. If not, where does the defect lie and how can the people be made to derive greater benefit from the expenditure.

(3) Family budgets also show the taxable capacity of different families. They show how much amount is spent on each head, whether that distribution of expenditure is prudent or reckless, what is the amount of savings, etc. Such knowledge is useful in deciding the magnitude of taxes.

(4) Family budgets provide the raw material for the construction of various index numbers, as for example, the cost of living index numbers. The latter index numbers give a correct idea of the cost of living of, say labourers, and suggest the minimum wage which must reasonably be given to them. They may, thus, go a long way in settling labour disputes over the wage question and prevent much loss resulting from unnecessary strikes and lockouts.

(5) Family budgets are also important because certain economic laws are based on their study. The Engel's Law of Consumption, discussed above, is one instance. It is just possible that further study of family budgets may result in the formulation of similar other laws.



### Importance to Social Reformers and Statesmen

Social reformers derive much inspiration and many lessons from family budgets. To give only one instance, they discover from family budgets the extent of richness in the country, the extent of poverty in it, and the extent of difference in the position of the rich and the poor. The budgets may also give an idea of the causes and nature of the social degradation and misery of the masses and the superficial and plentiful existence of the limited few. They may even make it the basis of a movement in favour of equitable distribution of wealth and income. Similarly, statesmen can make it the object of their activities and bring about a reform in a decisive fashion through taxation and other legislative measures.

### INTERMEDIATE QUESTIONS

1. Write a note on "Engel's Law of Consumption." (Madhya Bharat, I. A., 1953).
2. What are Family Budgets? Make two family budgets, one of a farmer and another of a teacher. Compare and contrast them in regard to different items of expenditure. (Madhya Bharat, I. A., 1952).
3. Write a note on "Standard of Living." (Madhya Bharat, I. Com., 1952).
4. Write a short note on "Standard of Living." (Poona, I. A., 1950).
5. Write a note on "Engel's Law of Family Expenditure." (Poona, I. Com., 1950).
6. What is the connection between wants and Standard of Living? Is an increase in wants always desirable? (Punjab, Inter., 1949).
7. What are Family Budgets? Discuss the advantages of their preparation and study to (a) the householders, (b) the statesmen, (c) the social reformers. (Raj., I. A., 1953).
8. What are the factors which determine the Standard of Living of an individual? Do you believe in the maxim of "Simple Living and High Thinking"? Does high standard of living always lead to greater efficiency? Give reasons for your answer. (Raj., I. A., 1953).
9. Explain Engel's Law of Consumption. (Raj., I. A., 1952).
10. Write a note on Standard of Living. (Raj., I. Com., 1953).
11. Write a note on Family Budget. (Raj., I. Com., 1952).
12. How does the Standard of Living affect wages? Can you get higher wages by raising your Standard of Living? (Raj., I. Com., 1949).
13. What is Engel's Law of Consumption? How far are its conclusions applicable to Indian conditions? (Raj., I. Com., 1950).

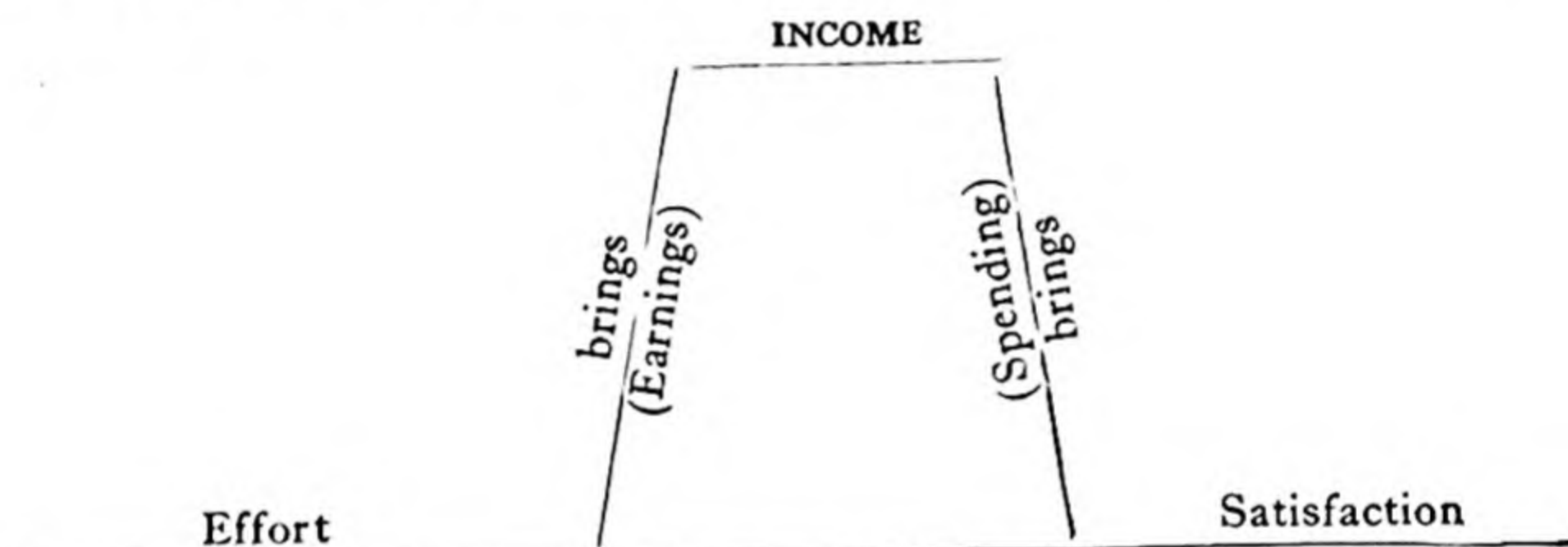
## CHAPTER 21

### INCOME, SPENDING AND SAVING

When it is matter of spending income, everyone wishes to get as much as possible for his money, and is, therefore, anxious that the price of the things he buys should be as low as possible.—*Layton*.

#### § 1. INCOME

We had discussed in a previous chapter that in the primitive stage of civilisation human beings used to satisfy their wants directly. If they felt hunger, they plucked some fruits or killed some animals, and ate them up. If they wanted shelter, they made a crude covering or hut. Other wants were similarly satisfied by one's own direct efforts. In course of time this stage of direct satisfaction of wants was superseded by the stage of indirect satisfaction of wants. In the modern society a man makes an economic effort which brings him certain money *income*. *He spends* this income on the objects of his desire and thus satisfies his wants. The satisfaction of wants thus comes through income. The following diagram illustrates this process :



You may come across certain persons even today who may be found to satisfy a large number of their wants directly, without the intervention of income. This is more true of people living in villages than of those living in cities. In villages there are persons who grow the corn they consume ; stitch the clothes they wear ; prepare the house they live under ; cook the food they eat ; and satisfy other wants through their own direct efforts. But such cases are rare and cover a comparatively small part of the whole field of economic wants. As a general rule, it is the income which plays the central part in the satisfaction of wants. Efforts bring income ; which when spent, brings satisfaction.

#### Disposal of Income

The satisfaction of the present wants is achieved for the most part through income ; but the whole of the income is not available for this purpose. The income earned by a person is devoted to two groups of objects, as follows :

(a) *Social Objects* :

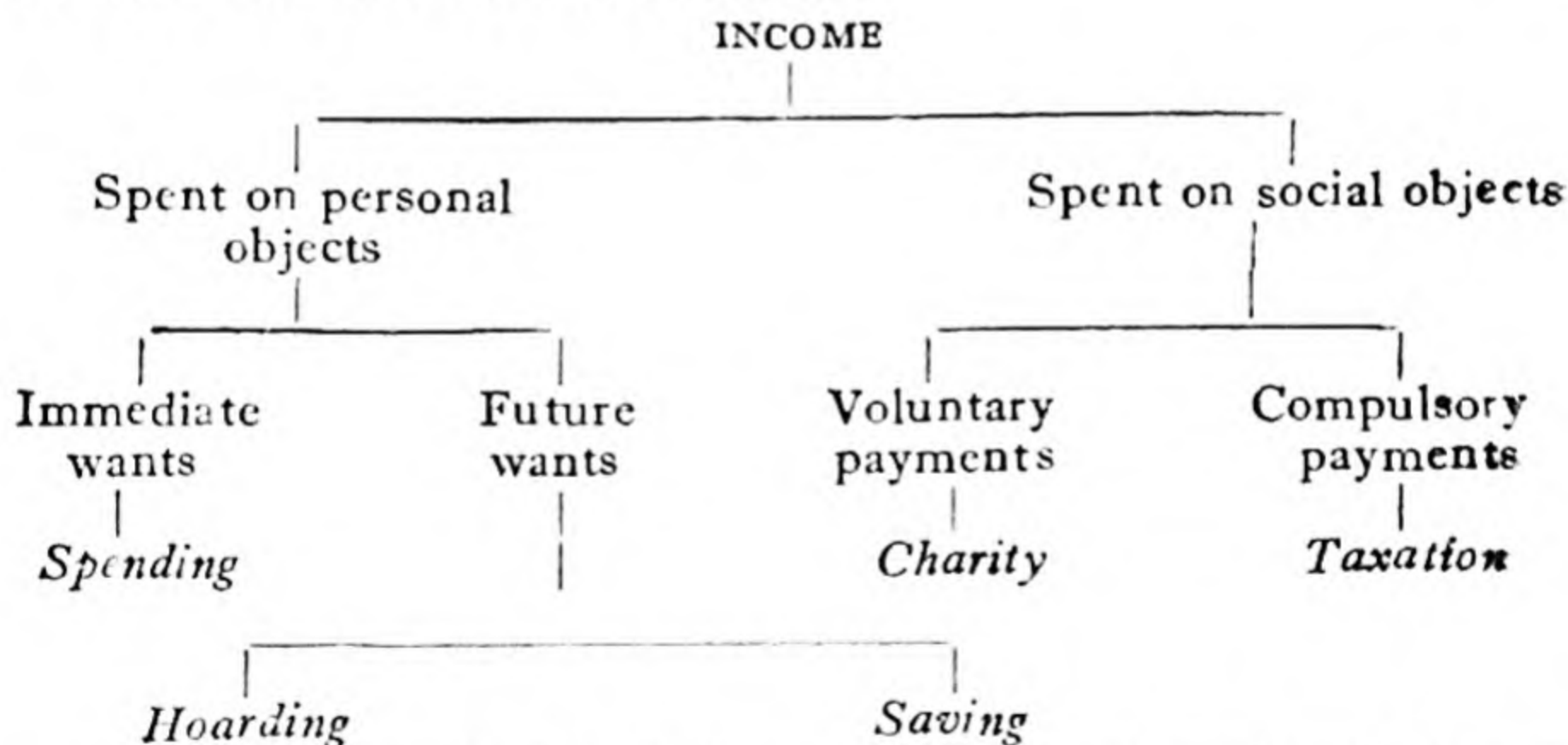
- (i) Compulsory Payment—Tax, and
- (ii) Voluntary Payment—Charity.



(b) *Personal Objects* : (i) Spending, (ii) Saving, and (iii) Hoarding.

*Social Objects.* A modern man lives in a society and derives certain conveniences and privileges from communal life. He, in turn, subjects himself to certain liabilities to the society. He has to pay *taxes* to the Central and State Governments and to Municipal Boards, so that the administration of the country, State and cities may be efficiently carried on. The payment of taxation is, of course, compulsory, but there are cases of voluntary expenditure incurred for the benefit of society. Money given as *charity* to the poor, endowments and donations to educational and other philanthropic institutions are some of the examples.

*Personal Objects.* However, a substantial and large part of income is spent on personal objects or on the satisfaction of personal wants. The amount devoted to this purpose may be either (i) for the satisfaction of immediate wants, or (ii) for the satisfaction of future wants. The devotion of income for the satisfaction of the present wants is known as *spending*. The amount set aside for the satisfaction of future wants is known as (i) *hoarding*, if the amount is not utilised in some productive manner, as for example, if it is closed in an iron safe and kept there for future use ; or (ii) *saving*, if this amount is used productively, i.e., if it is deposited in a bank on some interest. The following chart illustrates this classification of income.



Economics of charity shall not be discussed in this book ; it is a question of advanced economic study. The study of taxation is postponed to Part VI of this book where a detailed discussion of the subject will be given. In this chapter we shall throw some light on economics of spending, hoarding and saving only.

## § 2. ECONOMICS OF SAVING AND HOARDING

According to the analysis of income presented in § 1, saving is that part of income which is set aside in some productive form for meeting future wants. Saving is to be differentiated from hoarding which can be defined as the putting aside of income in an unproductive manner for the satisfaction of future wants. If a man puts a sum of

Rs. 5,000 in an iron safe to be used in future, he does not use the money productively ; therefore, it shall be called hoarding. But if he deposits this sum in a bank at interest, he uses it productively and this will be called saving.<sup>1</sup>

### **Saving versus Hoarding**

The money hoarded is a dead loss to the owner and to the country at large. You may be aware of certain misers who are very averse to spending ; nor do they like to entrust their money to the bank lest the bank fails or their actual wealth is known to other people, particularly the income-tax officer ! They lock up their money in an iron safe or bury it underground and are happy to possess it. This sort of hoarding does not yield any material welfare to the hoarder ; the money hoarded is as good as not possessed. Such money is of no use to the country at large which almost loses it since it cannot be devoted to any productive purposes. Hoarding is, therefore, to be discouraged.

Saving, on the other hand, is beneficial to the saver and the country alike. The person who puts some money, say, in a bank for the "rainy day" earns interest during the period he does not require it. The money deposited in the bank is lent out to industrialists, traders and agriculturists and goes to increase the wealth produced in the country.<sup>2</sup>

## **§ 3. SPENDING AND SAVING**

### **Relation between Spending and Saving**

The relation between spending and saving has been lucidly explained by T. S. Penson in the following words : "Spending and saving have one thing in common. In both cases wealth is given in exchange for certain goods and services, but the difference is that the goods and services are not put to the same use. In the case of spending, the goods and services are applied directly to the satisfaction of wants ; in the case of saving, the goods and services are applied to the production of other wealth, and so they bring satisfaction of wants indirectly instead of directly. For example, if a man who was about to spend £ 100 on additional furniture changed his mind and bought instead new inventions or appliances which would enable him to get more work done in a given time, he would have substituted saving for spending ; in each case a purchase would have been made, but the use to which the thing purchased was put was wealth production instead of wealth consumption.

"It would appear then that spending and saving are both essential features of our everyday economic life. Wealth is only produced because there is the desire to consume it, but since capital, the result of saving, is one of the necessary factors of wealth

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1 The motives leading to saving have been discussed in Book III of this volume.

2 Saving, it will thus be appreciated, is synonymous with 'capital.' Saving means conversion of 'wealth' into 'capital.'



production, wealth must not only be produced for present consumption, it must be produced also for consumption at a future date.”<sup>3</sup>

### Importance of Savings

Savings are of very great importance, both to the income receiver as well as to the country as a whole.

*Importance to the Income-Receiver.* It is a well-known wisdom to spend only a part of one's income and to save the remaining part. “Cut your coat according to your cloth”, is an old saying and implies that one's expenditure should be within one's income. In life one has to face many contingencies when money alone can help one. For meeting such contingencies, a man must save something from his current income, so that his past savings may come to his help when he is in financial difficulty. In particular, a man must save for the three following purposes : (i) He must save to meet some emergency, *e.g.*, sickness, marriage, education, etc. (ii) He must save something as a provision for his old age. In old age, the earning capacity of a man declines or stops but his expenditure does not stop. Only his past savings can come to his help then. (iii) He must also save something as a provision for his dependents after his death. A man who is without any past savings has to face all sorts of difficulties in life and is sometimes even utterly ruined.

*Importance to the Country.* In modern times, production on a large scale is impossible without large capital. Capital is formed out of the savings of the people. It is, therefore, imperative for a country wanting to have rapid economic progress and high standard of living, to have large savings and capital. Economic progress of our country has been very much held up for want of capital.

### Spending versus Saving

It is sometimes argued as to whether saving is more important than spending or spending is more important than saving. Arguments are given on both the sides by the advocates of the opposing camps to their own satisfaction. We shall point out what these arguments are and what are their defects.

Those who think that saving is more important than spending argue that saving leads to the accumulation of capital, so that if we have plenty of capital we can increase production to enormous extent. This will give rise to an era of prosperity; trade will be brisk; labourers will find better and more employment than before ; businessmen will earn decent profits; material prosperity will be visible on all sides.

The argument of the saving group is only partly correct. Prosperity is not the result of production alone. Goods produced must be sold. The sale of the goods produced is the real crux of the entire business problem. One might increase production to any extent, but if he cannot dispose of the goods produced, then production will be of no account. It will, on the other hand, lead to a “glut” in the market, sagging prices, trade depression, shrinking production, decreased em-

<sup>3</sup> Penson, *The Economics of Everyday Life*, Vol. , pp. 51-52.



ployment and low wages. But the goods produced can be sold only if people *spend* money. The conclusion, therefore, is that prosperity, which it is supposed can be brought about by an increase in saving, requires for its support increased expenditure. As such, the idea that saving is more important than spending is not accurate.

The argument of the advocates of spending group is similarly fallacious. They argue that if people spend money freely and on a large scale, goods will be sold in plenty; trade activity will be increased; production will get a stimulus; employment will go up; wages will also look up; and an era of prosperity will set in.

This argument can be easily criticised. It envisages the circle of prosperity as a result of increased expenditure. Increased expenditure, it is said, leads to increased production. But increased production cannot become an accomplished fact unless saving on a large scale has been done, so that sufficient capital is available for large-scale production. As observed above, saving is as much necessary for economic prosperity as spending.

It is, therefore, abundantly clear that for the economic welfare of a country saving and spending are both important. Just as both the legs of a man are necessary for walking, similarly both saving and spending are necessary and essential for the proper functioning of the national economy. Nobody can say which of the two legs is more important, for both are necessary for walking; similarly it cannot be stated, with any show of reason, whether saving or spending is more important in the interest of the economy, because no economy can be prosperous without either.

*Another Form of the Controversy.* The controversy as stated above is evidently misplaced; no party to the controversy is absolutely correct. The controversy can be presented in a slightly different form, when it becomes quite sensible as well as important. We may very well ask : Should a country spend more or save more at any particular moment ? This will depend upon the requirements of the moment. If, at that moment, the country in question has enormous capital accumulations so that the entire output is not likely to be sold off, it is essential that emphasis be laid on spending. For instance, during the great Depression of 1929-32, there was a glut in the market and spending was of better help to the economy than saving. If, on the other hand, there has been disproportionate spending of money at a particular moment, so that the capital resources are exhausted, obviously saving is more important than spending. For instance, after the First Great War it was found that countries had been spending money very recklessly during the war without any regard to their capital accumulations, with the result that after the war much capital was required. At a time like this, saving is more important than spending.

### **How Saving is made in Practice**

We have discussed the problem of spending *versus* saving in its theoretical aspect. Let us now examine how does a man decide what amount of his income he should spend, and what amount he



should save. If we look around us and try to study the psychology of those who save something, we would get an answer to our question.

Broadly speaking, persons can be divided into two classes, *viz.*,

(i) Those who save a certain percentage of their income, and decide to spend only the balance. There are some persons who deposit say 25% of their salary or income in bank, and spend only 75%. These are the persons who have control on their expenses, who have coolly and carefully mapped out their requirements and who are systematic in their general outlook. But it does not necessarily follow that their expenditure is wise. Their expenditure, in relation to saving, will be wise if in 75% of their income, they live well and without difficulty.

(ii) Those who spend money freely and whatever remains with them at the end of the month is kept by them as saving. Such persons attach greater importance to the present than to the future and are generally careless in their plan of expenditure. Though it is possible even here to exercise some control on expenditure, but this control is bound to be very weak. Here also we cannot say that the expenditure is wise ; on the other hand, since it is planless, it may be very unwise.

None of these methods is, however, ideal. The first method is too rough and unscientific. There is no sanctity about any particular percentage and it would be foolish to say that if one saves a certain percentage of one's income, it will be a very wise thing. The second method is too careless and does not attach proper importance to saving according to his status. He should try to envisage his want of money in future ; and he should determine his savings accordingly. Thus his present expenditure should be determined according to his needs and status, his savings according to his future needs ; and in this manner a proper proportion should be maintained between spending and saving.

#### § 4. EFFECTS OF INDIVIDUAL SPENDING ON SOCIETY

In the foregoing section we surveyed the effects of individual spending on the particular individual concerned. It would be readily appreciated that since an individual lives in a society and his actions affect its well-being, his method and nature of spending have telling effects on the welfare of the society he belongs to. He may benefit or harm the society through his spending. By spending money on healthy and salutary objects he may contribute to his productive efficiency, add to the richness of the society as a whole, and provide an ideal for others to follow. Or, he may indulge in harmful consumption of intoxicating drugs and liquors and things of that nature, make himself inefficient, prejudice the richness of the society, and set a bad example for others.

The effects of an individual expenditure on society can be studied under two heads : (i) effects on production and (ii) effects on consumption.

#### Effects on Production

An individual's method of spending has considerable bearing



on production, for production closely follows demand : whatever is demanded is produced. Thus production may be good or bad, more or less. More specifically, the following are the effects of individual expenditure on production :

(a) The method of individual expenditure may divert productive resources (labour, capital, etc.) from one channel of production to another. Productive resources are devoted to the production of those goods that are demanded and taken away from the production of those goods the demand for which slackens. This diversion of resources may be good or bad from the point of view of material prosperity. If, at any particular moment, housing scheme for labourers is the most pressing necessity, but some rich fellows demand beautiful and costly clothes, productive resources will be diverted to the production of the latter : such diversion will be socially injurious. This sort of misdirection of productive resources can be checked by state interference.

(b) The nature of individual expenditure may lead to the employment of labourers in healthy and useful avocations or in dangerous and injurious lines like the production of explosives and arms, etc. The former do not injure labourers ; but the latter take a heavy toll of human life, while some of them give rise to abnormal and injurious tendencies for crimes and such other nefarious acts.

(c) A consumer may, through the nature of his expenditure, increase or decrease his efficiency which will be reflected in his productivity. He may thus make the society rich or poor. He may exert similar influences on others with similar results.

### **Effects on Consumption**

The nature of the expenditure of an individual affects the nature of expenditure of other members of society as well. The instinct to follow others is strong in human heart. The social ties strengthen this tendency. If a person takes to drinking, he may persuade others to indulge in the same vice, and the habit may spread. Again, if his resources are considerable, he may monopolise nutritive articles for himself and for his class, thus leaving only poor varieties for the consumption of the poor. This is more possible when it is initiated by a group of persons than by an individual alone.

### **§ 5. STATE INTERVENTION IN SPENDING**

It is sufficiently obvious from the above discussion that individual spending has a tendency of affecting the society either beneficially or injuriously. To do away with the harmful effects on society, which individual spending is capable of, governments generally interfere and control injurious spending.

Opinions differ on the point whether the state is justified to interfere or not. This is indeed an age-long problem in Economics and Politics, on which there has always been a difference of opinion. Some persons hold that the function of the state is only to look after the national defence of the country and maintain peace and order. It has no right to interfere in matters so personal as spending. There are, on the other hand, other thinkers who vest the state with all possible



powers. According to them, the state has a right to interfere wherever it likes. The correct attitude is that which steers midway between these two extreme views ; the state should interfere only if the interest of the society is in the danger of injury. This is the opinion which today finds the greatest support and appears to be the most reasonable view.

### Some Old Methods of Interference

State interference in spending is not a thing of recent origin. There were several methods of control in force in ancient times as well. The most famous of these were the *Sumptuary Laws* which forbade the consumption of certain articles and insisted on the consumption of others. In the 19th century in Spain, for instance, people were spending money recklessly on silks, velvets, etc., when it was legislated that these things can neither be manufactured, not sold, nor used. Similarly in England during the 17th century when it was thought desirable to give encouragement to the silk industry, the use of silk for covering buttons and for making button-holes was made compulsory.

In India the State has interfered in spending in some cases. During the regime of the Congress Government, the policy of prohibition has in certain areas been launched upon according to which the consumption of liquor has been prohibited. This is due to the obvious ill-effects of this consumption on the efficiency of the people. Again, Governments in various States have tried to check the adulteration of various foodstuffs, *ghee*, milk, etc., in several ways.

### Wartime Interference : Rationing and Price Control

While the case for interference in individual spending is strong in peace time, it becomes stronger still in such an abnormal time as a war. At such a time, the needs of the war theatres come first and civilian consumption has to be restricted with a view to enable producers to supply war needs. A fixed quota of certain essential commodities is allotted to each individual during a given time and this is the most that he can purchase. This is known as *Rationing*. Rationing was introduced in India in several States and its utility and necessity was largely realised. Rationing serves another useful purpose as well. It involves the sale of commodities at a fixed price and thus helps to keep down prices. Rationing and price control go hand in hand. Government in this country have been generally intervening in consumption both in the matter of quantity and price : and such interference has been found useful.

### § 6. THE PROBLEM OF LUXURIES

We shall now take up certain special problems of individual expenditure, and their social repercussions. We shall also consider what should be the attitude of the state on such matters. These problems relate themselves to luxuries and waste.

Luxuries are generally consumed by the rich and supposedly they derive the benefit at least worth the price they pay for them. But if we look at luxuries from the point of view of society, we will find that



their consumption cannot be definitely and categorically approved or disapproved. The consumption of luxuries has been defended from social points of view ; while it has also been subjected to serious criticism from the same angle of vision.

### **Special Benefits of Luxuries**

Society derives the following benefits from the consumption of luxuries.

1. Luxuries are necessary for human progress. Luxury has been defined by Professor Gide as the satisfaction of a superfluous want; and as the word "superfluous" is associated with some accusation, luxuries are usually looked down upon. But a thing does not become condemnable simply because it is superfluous. As Voltaire once remarked, even the superfluous is sometimes necessary, a remark which applies with much force to luxuries. Every man must have some luxuries to consume ; otherwise he will be reduced to the position of a beast of burden, with no variety, pleasure and richness in life. Every want was, in fact, considered a luxury at the time of its origin and had it then been suppressed as being superfluous, society would have today been in the stage of barbarism.

2. Generally luxurious articles are artistic and require skill and refinement. The consumption of luxuries, therefore, raises the standard of artistic excellence.

3. The desire to get luxuries at present unattainable fires ambition or leads to the putting forth of greater power of mind and body. When a man sees some persons enjoying luxuries in plenty, he feels a prompting to do the same. This feeling inspires him to work hard and more efficiently so that he may be able to increase his income and enjoy the luxuries he pines for. An ordinary labourer inspired by these motives may in course of time become a boss, then the inventor of machinery, and eventually the owner of a factory.

4. The consumption of luxuries raises the standard of living. A rise in the standard of living discourages procreation and thus checks over-population. Before a newly married couple, the question which frequently arises is : "A car or a baby" , and the former often wins! It is interesting to observe that the rich have fewer children than the poor .

5. Luxuries, like precious ornaments and stones, constitute a form of insurance in the days of financial difficulties. This is the reason why women of our country attach so much importance to their gold and silver ornaments ; for after the death of their husband or in difficult days, they may be of use to the family.

6. It is sometimes mentioned that the consumption of luxuries creates employment. Suppose a rich man makes a grand show of fireworks and invites his friends and relations to witness it. Employment will, then be given to fireworks-makers, to drivers of conveyances in which his friends and relatives will come, and so on. But this, as we shall presently see, is not quite correct.

7. Luxuries, it is sometimes mentioned, lead to the transference



of wealth from the rich to the poor. Generally luxuries are consumed by the rich who give money to the poor who supply them the articles of luxury. This again is not quite correct as will be shown below.

### **Social Disadvantages of Luxuries**

1. A strong argument against luxuries is that their consumption is generally confined to the richer sections of the community. Thus a few rich men are able to enjoy joy flights and joy-rides, to pass their days in what Bernard Shaw styles as "resourceless loafing and consumption of chocolates, cream, cigarettes, cocktails, novels and illustrated papers". The poor people never get a chance to enjoy them. Luxuries thus go to make the difference between the rich and the poor look very wide, a factor which has led to revolutions in several countries of the world. In our country in the olden days luxuries were few and far between and the distinction between the poor and the rich was not very pronounced. Social life had a smooth run. But now with the increase in the facility, number and popularity of luxuries, the gulf between the rich and the poor has become very wide and these two sections are now represented as foes rather than friends.

2. Sometimes the poor are also able to enjoy some luxuries, but this is not free from mischief. The poor have very slender resources and the use of luxuries often takes place at the cost of necessities and comforts. Sometimes luxuries are very injurious to the poor and deteriorate their efficiency. Liquor is a luxury of this character.

3. Some people believe that it is wrong to say that luxuries raise the standard of art of the community. Articles are now produced through mechanical appliances in factories where skill is not much needed. It is only in those few businesses where hand work still persists that the luxuries may be said to encourage art.

4. The statement that luxuries create employment is not correct. If money is spent, not on luxuries but on some other more useful commodities necessary for efficiency and healthy living, there will be no less employment and briskness of trade.

5. The argument that luxuries lead to the transfer of wealth from the rich to the poor is also doubtful. The amount of money, that a rich man gives to the poor for supply of luxurious articles, is not kept by the latter entirely for himself. The preparation of the article requires costly raw materials and sometimes costly tools as well. The labourer has to pay for them and a large portion of what he receives thus passes out of his hands, generally into the hands of the rich persons who deal in such costly things. Thus, in essence, some rich persons pay money to other rich persons through the medium of labourers. The transfer of wealth from the rich to the poor does not actually take place.

### **§ 7. WASTE**

When we spend money on certain objects, we expect to receive some return. This return may be more than, or less than, or equal to, the amount paid for the commodity purchased. When the expenditure on a particular object gives less utility than the amount spent, it is called 'waste'. *Waste may, therefore, be defined as the spending of money without deriving corresponding benefit or return of satisfaction.*



Examples of waste can be easily imagined. When fruits "go bad", when one leaves food uneaten in a dish, when a work is left incomplete, some waste takes place.

An expenditure is called waste either from the point of view of the individual, or from the point of view of the society, or from both the standpoints. All the examples given in the previous paragraph are the examples of waste from both, the individual as well as the social, standpoints. A feast given by a rich man may not be a waste from his point of view—he may feel that he has derived as much benefit as the cost of the entertainment; but little importance may be attached to such fleeting enjoyment from the social angle of vision and it may be considered a social waste.

### § 8. DESTRUCTION OF PROPERTY AND EMPLOYMENT

Destruction of wealth, accidentally or deliberately, brings with it no satisfaction and is, therefore, a waste. It is asserted by some that destruction of wealth creates employment since the wealth that has been destroyed has to be replaced. This argument is, however, fallacious and is known as "Make-work Fallacy". It is certainly true that if a glass pane is broken, or a book is torn away, or a house is reduced to ashes, each of these things will have to be replaced, and employment will thus be created for their producers; but had they not been destroyed, the money devoted to their replacement would have been spent on some other useful objects. The person whose glass pane was broken, might then have purchased some sweets for his family; the student whose book was torn to pieces, could then have purchased a fountain pen; the house-owner whose building has burnt down, could then have purchased a machinery. Employment thus would have been created even in the absence of any destruction of property. The creation of an employment is based on expenditure and whether the expenditure is for the replacement of the destroyed property or for the purchase of new articles, is immaterial so far as the total volume of employment goes. It is, of course, in the interest of the nation that wealth may not be destroyed and it may not be made poorer in this fashion.

### APPENDIX TO CHAPTER 21

#### **The Broken Pane**

Federick Bastiat, a French economist of great repute, has given the story of the *Broken Pane* in one of his essays, known as *Sophisms of Economics*, which is reproduced below.

Have you ever had occasion to witness the fury of the honest burgess, Jacques Bonhomme, when his scapegrace son has broken a pane of glass? If you have, you cannot fail to have observed that all the bystanders, there were thirty of them, lay their heads together to offer the unfortunate proprietor this never-failing consolation, that there is good in every misfortune, and that such accidents give a fillip to trade. Everybody must live. If no windows were broken, what would become of glaziers? Now, this formula of condolence contains theory which it is proper to lay hold of in this very simple case, because it is exactly the same theory which unfortunately governs the greater part of our economic institutions.

Assuming that it becomes necessary to expend six francs in repairing the damage, if you mean to say that the accident brings in six francs to the glazier, to that extent encourages his trade. I grant it fairly and frankly and admit that you reason justly.



The glazier arrives, does his work, pockets his money, rubs his hands, and blesses the scapegrace son.

*That is what we see.*

But if, by way of deduction you come to conclude as is too often done, that it is a good thing to break windows—that it makes money circulate and hence encouragement to trade in general is the result—I am obliged to cry, Halt ! Your theory stops at what we see, and takes no account of *what we don't see*.

*We don't see* that since our burgess has been obliged to spend his six francs on the thing, he can no longer spend them on another.

*We don't see* that if he had not this pane to replace, he would have replaced, for example, his shoes, which are down at the heels, or have placed a new book on his shelf. In short, he would have employed his six francs in a way in which he cannot now employ them. Let us see, then, how the account stands with trade in general. The pane being broken, the glazier's trade is benefited to the extent of six francs. *That is what we see.*

If the pane had not been broken, the shoemakers or some other trade would have been encouraged to the extent of six francs. *That is what we don't see.* And if we take into account what we don't see, which is a negative fact, as well as what we do see, which is a positive fact, we shall discover that trade in general or the aggregate of national industry has no interest, one way or other, whether windows are broken or not.

Let us see, again, how the account stands with Jacques Bonhomme. On the last hypothesis that of the pane being broken, he spends six francs, and gets neither more nor less than he had before, namely, the use and enjoyment of a pane of glass. On the other hypothesis, namely, that the accident had not happened, he would have expended six francs on shoes and would have had the enjoyment both of the shoes and of the pane of glass.

Now as the good burgess, Jacques Bonhomme, constitutes a fraction of society at large, we are forced to conclude that society, taken in the aggregate, and after all accounts of labour and employment have been squared, has lost the value of the pane which has been broken.

### INTERMEDIATE QUESTIONS

1. Write a note on "Saving and Spending." (M. B., *Inter Arts*, 1953)
2. What do you understand by the hoarding habit and what are its evil consequences? (*Punjab, Inter.*, 1951).
3. Distinguish between saving, spending and hoarding. What are the social effects of indiscriminate spending? Discuss them fully. (*Raj., I. A.*, 1952).
4. "From social point of view, saving is better than spending". Do you agree? Explain clearly. (*Raj., I. A.*, 1944).

# Production

Book III

Chapters 22—35

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## CHAPTER 22

### MEANING OF PRODUCTION

A school of French economists of the 18th century, the Physiocrats, gave currency to the belief that agriculture is productive in a special and particular sense. They even went so far as to characterise manufacturing and mercantile pursuits as sterile or unproductive. Complete knowledge of the real nature of production has emancipated most minds from these misconceptions.—*Seuger.*

#### § 1. WHAT DOES PRODUCTION MEAN?

Human beings have to make some effort in order to satisfy their wants. This effort is meant to change the form of the existing matter in such a way that it may acquire the desired utility, *i.e.*, the want-satisfying power. The existing matter may be of no use in its original state; but after a change in its form is brought about it comes to possess utility. Obviously what a man creates by his effort is not matter, matter in fact cannot be created, but utility. The transformation of matter resulting in the creation of utilities is known as Production. Production may, therefore, be defined as *the creation of utilities*.<sup>1</sup>

Let us take some concrete examples. A mason, building a house, simply puts bricks, mortar and cement in such an order as to give them the shape of a house. He does not create matter—bricks, mortar and cement are not made by him; he simply creates utilities—the house has greater utility than the utility of bricks, mortar and cement separately. Similarly a tailor first cuts pieces of required shape from a roll of cloth and then stitches them with thread, and prepares, say, a coat. He does not create matter—cloth or thread are not made by him; he simply creates utility—the coat has greater utility than the articles it is made of. A weaver, again, does not create cloth but rearranges the yarn in such a manner that cloth is produced which has greater utility than yarn. A potter in making pots out of clay, a goldsmith in making ornaments out of gold, a carpenter in making chairs out of wood and a miner in digging out ore from the bowels of earth, all create utility (and not matter) and are, therefore, producers. By

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<sup>1</sup> To create new matter is more than is given to man to do. Hence by the term production, in its widest sense, we mean simply bringing forth of new goods—the discovery of new utilities, the change or transformation of already existing goods into new utilities in a secondary and more limited sense. Production is an increase of resources, in so far as goods produced satisfy greater human want, than those employed in the production itself. Roscher, *Principles of Political Economy*, Vol. I, p. 119. (Translation from the German by Lalor).



production, it may be repeated, we mean the creation of utilities and not of matter.<sup>2</sup>

### Production as a Branch of Economics

Production as an economic act may well be differentiated from production as a branch of Economics. In the former sense, production is the creation of utilities; in the latter sense, it is that division of Economics which studies the problems relating to the production of wealth. Students should clearly note these two applications of the term 'production'.

#### § 2. KINDS OF UTILITY

Utilities are created in six different ways and are divided into six classes accordingly. Corresponding to them are six types of the process of production :

(1) *Form Utility*. When utility is created by changing the form of the matter, it is called form utility. The carpenter who gives to a log of wood the form of a chair, the blacksmith who gives to iron the form of a hammer, and the goldsmith who gives to gold the form of a necklace—all create form utility. In the creation of form utility, it has been aptly remarked, there is the widest possible range of operations, mechanical or chemical, from that of the agriculturist by whose intervention the black earth of the *prairie* is transmuted into golden grains, to that of the lacemaker whose whole industry is to arrange his gossamer into fantastic shapes.

This form of production includes all the extractive and manufacturing industries. Extractive industries are those industries in which men are engaged in extracting or drawing forth raw materials from the lap of Nature; for instance, agriculture, mining forestry and fishery. Manufacturing industries, on the other hand, are those industries which give different forms of useful articles to the raw materials, for instance, cotton textile mills, sugar factories and steel factories.

(2) *Place Utility*. The utility created by the removal of an article from one place to another, is known as place utility. Generally the article in question is plentiful at the place from where it is transported and scarce at the place to which it is removed. For example, Kashmir fruits have greater utility in Allahabad than in Kashmir ; timber has greater utility in a pulp factory or in a carpenter's workshop than in a forest; sand has greater utility in the heart of a city where it may be used for the construction of buildings, than in a desert or on the bank of a river. The carrying of all these things from their respective places of

2 The definition of production as the creation of utilities is, in the opinion of Prof. Nicholson and others, not strictly accurate. Economics, they say, is not concerned with each and every type of utility; only if it has value. Economics studies wealth which consists of goods and services which have value-in-exchange; those which have no value-in-exchange are not studied in Economics. Strictly speaking, therefore, production should be defined as the "creation of values." Professor Nicholson defines production as the "creation of economic utilities"; and thinks that by so defining it we will get rid of several vague and inconsistent ideas popularly associated with this term. But as we use the term 'value' to connote the same sense as economic utilities, it will be better to define production as the creation of value.



origin to their respective places of consumption, increases their utility. Transport is, therefore, a productive process.

(3) *Time Utility*. The utility which is created through the preservation or storage of a commodity for some time, is known as time utility. There are some commodities which acquire greater utility with the passage of time. Old wine, for instance, is considered to be far more tasteful than fresh wine. Old rice similarly possesses more utility than fresh rice. Again, a cake of ice which has no utility in the winter may acquire utility through being kept over into the following summer. Such processes of preservation and storage are, therefore, productive processes. Accordingly the trader, who purchases goods at the time when they are in plenty and cheap and sells them at the time when they are comparatively scarce and dear, is a producer.

(4) *Possession Utility*. Possession utility is the utility which is created by transferring the possession of an article. Possession utility is created because the transferee derives greater utility from the possession and use of the article than the transferor. For instance, books and stationery kept in the shelves of a shop-keeper do not have as much utility to him as they have to their purchasers. The processes of purchase and sale are, as such, productive processes and shopkeepers are producers.

(5) *Service Utility*. The utility created by the rendering of some service not embodied in a material object, is known as service utility. All the personal services, which are rendered directly to the person of the consumer, create service utility. Similarly, all the public services, which benefit citizens through the agency of the State, create utility. The teacher who teaches the student, the doctor who cures the patient, the actor who acts, the dancer who dances, and the constable who protects life and property of the citizens, all create service utility and are producers.

(6) *Knowledge Utility*. The utility which is created through the importation of knowledge is known as knowledge utility. A good example is an informative advertisement. One may not know the advantages of tooth-paste, which may, therefore, have no utility to him; but if an advertisement tells one its attributes and advantages, it may begin to appear very necessary. Its utility is thus created by the advertisement. Advertisements which convey knowledge utility are productive.

The above discussion shows that the term production is fairly wide. A *farmer* is a producer because he creates form utility. So is a *trader* who creates possession utility. *Domestic servants* are producers as they create service utility. Carpenters, blacksmiths, businessmen, lawyers, doctors, teachers, engine-drivers, advertisement framers are all producers.<sup>3</sup> But a *college student* is not a producer because he does not create any utility as a student.

3 In the early times, there was in France a group of economists, known as Physiocrats, who held that agriculture alone is productive, other occupations being unproductive. Physiocrats were followed by Mercantilists according to whom commerce alone was productive. Adam Smith, the Father of Modern Economics, later on extended the scope of production to the creation of all the material objects. The scope, has, in modern time, been still more widened so as to include the utility of any and every kind, whether embodied in a material object or not.



## § 3. PRODUCTIVE OCCUPATIONS

Productive occupations may conveniently be divided into the following classes :

**1. Industrial Occupations**

These occupations are concerned with production of material objects. They are divisible into : (a) *Extractive occupations* which are concerned with the extraction or obtainment of materials from the lap of Nature : and (b) *Manufacturing occupations* which concern themselves with the conversion of raw materials into finished products.

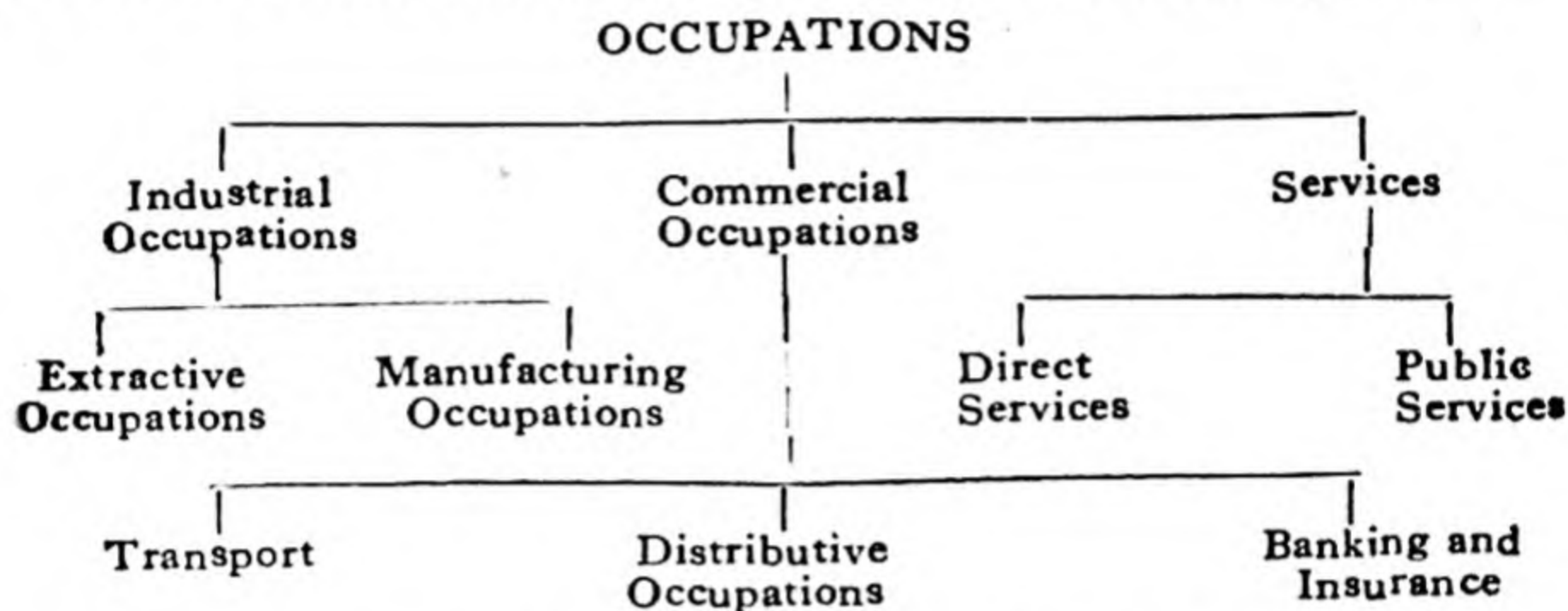


Chart 23. Showing classes of occupations.

**2. Commercial Occupations**

The occupations which provide links between producers and consumers, *i. e.*, help in the transfer of goods from producers to consumers, are known as commercial occupations. Such occupations are of three varieties :

(a) *Distributive*. They include the activities of the persons who actually distribute goods among consumers directly or indirectly.

(b) *Transport*. It relates itself to the movement of goods from one place to another. Railway transport, motor transport, etc., belong to this category.

(c) *Banking and Insurance*. Bankers finance the movement of commodities and also give monetary help to wholesalers, retailers and consumers in diverse ways. Protection against fire and sea risks and other contingencies is provided by insurance companies.

**3. Services**

The professions of rendering services are those in which service is rendered direct to consumers or the public. The former is known as direct service ; and the latter, public service. The services of doctors, lawyers, teachers and domestic servants are direct services. The services of civil servants, High Court Judges and constables are public services.

**INTERMEDIATE QUESTIONS**

1. Discuss the distinction between Form Utility and Place Utility. (Bombay, I. A., 1940).

2. What do you understand by Production ? In the light of your explanation, consider whether the following are productive workers :

(i) farmers, (ii) college students, (iii) professors and (iv) parents.  
(Madhya Bharat, I. A., 1952).

3. What is meant by Production ? Explain the importance of the various factors of Production. (Mysore, Inter., 1943).

4. What do you understand by production ? How is it related to consumption and distribution ? (Poona, I. Com., 1949).

5. What is production ? Can we establish any laws of production ? (Punjab, Inter., 1953).

6. What do you understand by Production. Consider whether the following are productive workers : (a) farmer, (v) domestic servant, (d) college student. Give reasons. (Raj., I. A., 1940).

7. Write a short note on Production. (Raj., I. Com., 1948).

8. What do you mean by Production ? (Utkal, I. Com., 1951).



## CHAPTER 23

### FACTORS OF PRODUCTION

Thanks to a tradition dating from the time of the first economists, three agents of production have always been distinguished : land, labour and capital. This threefold division has the advantage of simplicity, and there seems to be no need to abandon it.—*Gide*.

#### § 1. FACTORS OF PRODUCTION

There are certain things which contribute to production. They are, therefore, called factors of production. The factors of production are chiefly two : (i) the personal exertion or effort of human beings ; and (ii) the object to which the exertion is applied. If a hunter wants to kill animals, he must make an effort to kill them ; and the animals which he wants to kill must exist. Similarly, the grass-cutter who wants to cut grass must devote himself to the purpose and the grass which he wants to cut must be in existence. These two requisites are indispensable for production ; without either of them, no production is possible. These two requisites of production are known in Economics as (i) *Labour*, which refers to the personal exertion of human beings, and (ii) *Land or Free Gifts of Nature*, which signifies the objects provided by Nature and which men adapt for their use.<sup>1</sup>

The importance of these two factors of production was realised by man during the days of his earliest habitation on this planet. It was also appreciated by him fairly early that his efforts could be made more effective if he could have some implements or weapons to aid his efforts. The primitive hunter had realized that he could kill more animals if he had a spear ; and the grass-cutter had similarly felt that he could cut grass quickly and plentifully if he could have a hook. This external implement or appliance, which increases the effectiveness of human efforts, and which emerged as a third factor of production at an early stage of civilisation, is known as *Capital*.

These are the three chief requirements of productive effort, namely :

- (1) The *Natural*—Free Gifts of Nature.
- (2) The *Personal*—Man's own energy and skill.
- (3) The *Artificial* —That which man has made to help him in this effort.

<sup>1</sup> There are two essential factors in all productive processes : nature and man. Nature figures in production as an aggregate of materials and blind forces. Acting in conformity with invariable laws, she destroys as readily as she creates. Man, on the contrary, appears as a being with conscious purpose. He also destroys—not ruthlessly, however, as nature seems to do, but in order to gratify his wants.—Seager, *Op. Cit.*, p. 32.

Wants	Leading to	Efforts	Requiring	Natural forces Personal activity Artificial aids	Resulting in	Production of wealth	Which brings satisfaction of wants
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Chart 24. Explaining the factors of production.

Other factors also come to be recognized a little later. With the passage of time and advancement of learning, production took a

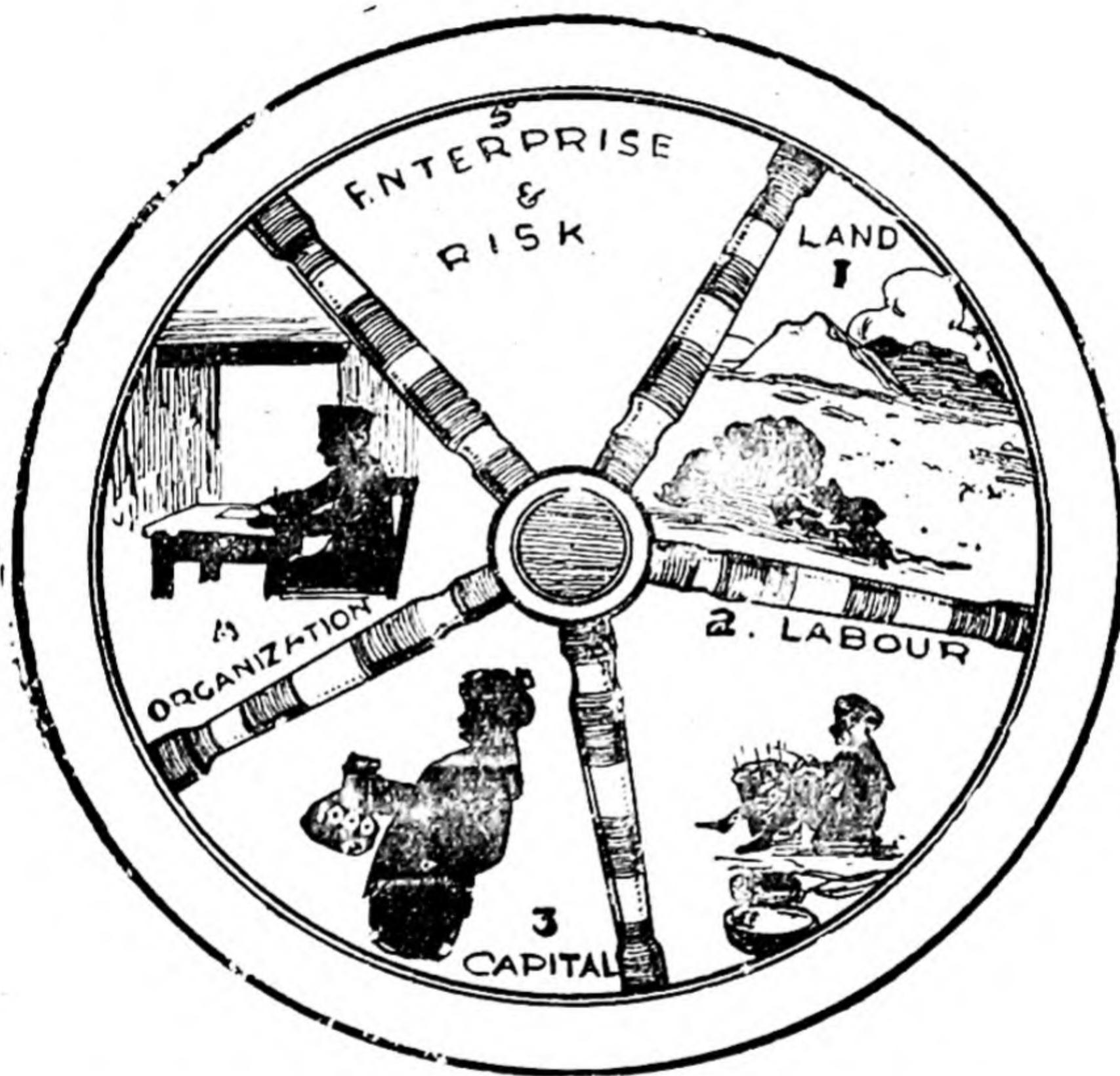


Fig. 25. Illustrating Factors of Production or Wheel of Production.

complex form; wealth began to be produced on a large scale, in big factories and large farms. Such production required enormous natural gifts, immense labour and considerable capital, all of which had to be systematically organised in the act of production. The organization of production, *i.e.*, the bringing into effective co-operation of the various factors, became a very important and a separate factor of



production. *Organisation* occupies a very important place in the production of wealth in modern times.

Production on large scale involves considerable risk and uncertainty. If the goods produced are not sold, enormous loss is suffered. The risk has become especially great because of the fact that the markets for commodities now tend to become international. *Risk-taking* or *enterprise* has thus appeared as another factor of production.

The factors of production are, therefore, five in number : (i) Land or Free Gifts of Nature, (ii) Capital, (iii) Labour, (iv) Organisation, and (v) Enterprise. Of these factors of production, the last three are the forms of human activity, whereas the first two are the external aids to human effort.

The meaning of the five factors of production as explained above is only provisional. Their exact definitions will be given in their proper places.

### **Factors and Agents of Production**

The term *factors of production* should be distinguished from the term *agents of production*. Factors of production signify the actual things which are required for production; while the suppliers of these are known as the agents of production. Land, labour, capital, organisation and enterprise are factors of production ; while landlords, labourers, capitalists, organisers and entrepreneurs (or enterprisers) are agents of production.

### **Illustration**

The various factors of production used by a village weaver, a Banaras brass-worker and a cotton textile factory-owner, may be studied on a comparative basis with a view to elucidate and illustrate their relative importance in different forms of production.

*Land or Gifts of Nature.* The village weaver does not require much land or free gifts of Nature. He simply needs a small plot of land where he can fix up his loom, he does not use water-power or electricity. The Banaras brass-worker generally needs more land to set up his workshop, though electric power is rarely used by him. The cotton textile factory requires pretty large quantity of land. The factory occupies a big plot of land while electric power is used for the operation of machinery. Its climatic requirements are also definite, for the atmosphere must be humid so that the thread may not break when it is being spun.

*Labour.* The village weaver does not require much labour. Generally he depends upon his personal exertion and is sometimes helped by the women and children of his family. The Banaras brass-worker requires larger amount of labour. He works himself and also employs some apprentices or labourers. In a modern cotton textile mill, however, immense quantity of labour is needed, employing as it does hundreds and thousands of hands each day.

*Capital.* A village weaver requires small capital for the purchase of his ordinary loom and raw material which is generally cheap. The Banaras brass-worker has to manage for large capital for he has



to equip himself with various implements like chisel, furnace, etc. The raw material used by him is also more costly. The capital invested in a cotton textile mill surpasses both of them. The large factory buildings, the gigantic machinery, huge stock of raw materials and large stock of goods awaiting sale, involve enormous capital.

*Organisation.* The village weaver does not require much organising skill in his trade which is usually simple and of a small scale. The Banaras brass-worker, who has to handle more capital, requires the organising skill to a greater degree ; but his need is not considerable. Organisation assumes supreme importance in a modern textile factory. In the acquisition of free gifts of Nature, labour, capital and enterprise and in bringing them into the most effective co-operation, real skill of organisation is required.

*Enterprise.* In the trade of village weaver with small capital and small output, risk or enterprise is meagre. The brass-worker has to undertake greater risk because he invests more capital and his output is large. The greatest risk is borne by the owner of a modern textile factory who has to look after large markets, who cannot expect a fixed demand for his produce, and who has large capital at stake.

## § 2. RELATIVE IMPORTANCE OF THESE FACTORS

Attempts are sometimes made to discuss the relative importance of different factors of production. Such attempts are associated with much difficulty for two reasons. Firstly, when all the factors of production are necessary in the act of production, it is rather difficult to decide which is more important and which is less important. Secondly, the owner of every factor of production wants that greater importance should be attached to the factor owned by him. Capitalists award the first place to capital; labourers to labour; landowners to land ; while organisers and enterprisers do not lag behind in pushing forward their claim to priority.

The importance of these factors can be easily shown. Of all the factors of production, labour plays an active part and sets the whole productive machinery in operation. Nature is, however, absolutely passive and merely obeys man, often after long resistance. Nevertheless whenever we have to produce material wealth, Nature is found indispensable. The activities of man cannot achieve anything in a vacuum; they operate upon certain materials furnished by Nature. Capital also plays a passive part; it is not even a primary factor of production. Logically, as well as chronologically, it is derived from land and labour ; and has been named as "stored-up labour"<sup>3</sup>. Organisation and enterprise are special forms of human activities and have acquired special prominence during these days of large-scale production and international markets. It can now be appreciated by the reader how difficult it is to attach relative importance to each of the five factors.

<sup>3</sup> Capital is an intermediate product of nature and labour, nothing more. Its own origin, its existence, its subsequent action, are nothing but stages in the continuous working of the true elements, nature and labour —Bohm-Bawerk, *Positive Theory of Capital* (Translation from the German by Smart) p. 96.



But we may hazard the observation that according to the stage of economic progress attained by a community, some factor comes to occupy a more prominent position than others. For instance, in the earliest stage of human habitation on the earth Nature's control over man was supreme ; and land or free gifts of Nature were the most important factor of production. As man made progress, his control over Nature began to increase ; labour gained an upper hand over Nature, and began to be regarded as the most important factor of production. Still later, capital began to be used in production in enormous quantities, particularly after the introduction of gigantic machinery driven by artificial power ; and capital successfully challenged the supremacy of labour. In recent times, with a tremendous increase in the scale of production and the international character of markets, organisation and enterprise have come to the forefront.

According to some economists, there are only two factors of production, land and labour. Capital, they say, is appropriated from Gifts of Nature by human labour, and is simply an "instrument of production". Enterprise and organisation are, again, only special varieties of labour. Land and labour, therefore, are the *primary* factors of production; capital, organisation and enterprise being only *secondary*. Of the primary factors of production, *i.e.*, land and labour, man is active, whereas Nature is only passive. Labour is, therefore, the most important factor of production.

#### INTERMEDIATE QUESTIONS

1. What is meant by Production. Explain the importance of the various factors of production. (Mysore, Inter., 1943).
2. What is the difference between an agent of production and a factor of production ? (Punjab, Inter., 1947).
3. What are the factors of production ? (Utkal, I. Com., 1951 S).

#### ATTENTION

The problem of the *Mobility of Factors of Production* has been discussed under Distribution in Book V, Chapter 48, to which a reference may be made when necessary.

## CHAPTER 24

### PRODUCTIVE EFFICIENCY

Efficiency is the watchword of future industrial progress, growth and expansion. The nation which produces with the greatest efficiency will be the one which will lead the van of industrial nations.—*Brisco*.

Every line of business, be it publishing or printing, shoe-making or cloth-manufacturing, or of any other type, engages a large number of firms and companies. All such business units are not equally successful. Some firms make large profits, while others, engaged in the same trade are hardly able to escape losses. Certain companies pay as high as 20 per cent dividend (profit) to their shareholders, while others fail to declare any dividend at all. Why is there such a great difference in the earnings of the several units? It is chiefly due to variations in the productive efficiency of the establishments. Those firms and companies which are very efficient earn high profits, whereas those which are inefficient are run at a loss. The question of productive efficiency is, therefore, the one which deserves further study.

Productive efficiency may be defined as the capacity to produce more goods, or better goods, or both, during a given time. It is generally expressed as the ratio between the actual performance of an operation and the maximum performance which has been determined to be possible.<sup>1</sup> It depends upon;

(i) *Internal Conditions*, i.e., the conditions prevailing within the business unit ; and

(ii) *External Conditions*, i.e., forces and factors affecting the success or otherwise of the business unit from without, e.g., means of transport, the availability and extent of markets, and the price ruling in the market.

#### Internal Conditions

Internal conditions of efficiency are those which arise and operate in the undertaking itself. They have to do with the *way the work is done*. They are divisible into two broad classes :

(a) *The Efficiency of Each Factor of Production*. By efficiency of a factor of production is meant its suitability for the purpose to which it is applied. The greater the efficiency of a factor of production, the greater will be the efficiency of production as a whole, and higher will be the profits earned other things remaining the same. The conditions determining the efficiency of each factor shall be treated further in its proper place.

(b) *The Excellence of the Proportion in Which These Factors are Combined*. Productive efficiency depends not only on the efficiency of each individual factor, but also on the excellence of the combination

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<sup>1</sup> Efficiency has become a separate subject of study. For detailed study, see Carlson, *The Industrial Situation* ; Duncan, *The Price of Inefficiency* ; etc.



of the various factors of production. If an ideal combination is reached, maximum profits are earned; while the earning declines as this ideal combination is departed from. The attainment of the ideal combination is not an easy task and is preceded by a long and laborious process of trial and error.

### **External Conditions**

The external forces and factors which affect the productive efficiency are several. They affect, chiefly, the marketing of the produce and the problem whether the price obtained is sufficient to give adequate rewards to the various agents of production. The important ones of the external conditions are :

- (1) The localisation of industry and the nearness of the market ;
- (2) The price ruling in the market ;
- (3) The competition from other producers ;
- (4) The excellence of the means of transport ;
- (5) The efficiency of financial institutions; and, above all,
- (6) The economic policy of the Government.

Each of these elements has its own special importance; so much so that the attempts of the producer to achieve maximum productive efficiency may be frustrated by the absence or inadequacy of any one of them.

## CHAPTER 25

### THE LAWS OF RETURNS

The tendency towards diminishing returns is not an economic theory but is one of the most commonplace facts of agriculture. The very existence of rental and sale value of land sufficiently attests it —*Devanport*.

#### § 1. INTRODUCTION

If a manufacturer, or a cultivator, or any other businessman wants to increase his output, he has to increase the quantity of the various factors of production used in his business. The returns due to additional quantities of productive resources are not fixed. In some cases the businessman finds that if he increases the quantity of the various factors of production, the return (*i.e.*, the output) due to each successive dose (or unit) of productive resources will go on increasing. This tendency of the return due to each successive dose to go on increasing is known as the *Law of Increasing Returns*. The tendency encourages a businessman to increase the scale of this business. This, however, does not always happen. In some cases the return due to each successive dose of productive resources goes on diminishing. This tendency of the returns due to successive doses to go on diminishing is known as the *Law of Diminishing Returns*. This tendency discourages a producer from increasing the scale of business. In certain cases, the return due to each successive dose will be found to remain fixed or almost constant. This tendency of the return due to each dose to remain constant is known as the *Law of Constant Returns*. These three laws of returns occupy a central position in production and need detailed study.

#### § 2. THE LAW OF DIMINISHING RETURNS

##### The Law as Applied to Agriculture

The law of diminishing returns has special application to agriculture and is usually associated with it. Every cultivator knows that this law operates and the benefits by this knowledge, though he cannot express it in the shape of a law due to his illiteracy.

Any cultivator would tell you that, after a certain stage in cultivation, the application of an additional *dose*<sup>1</sup> (or unit) of labour and capital to a particular plot of land does not bring about as much return as the previous doses. For instance, if the first unit produces 50 maunds of rice, the second unit would produce, say, 47 maunds, the third only 41 maunds and so forth. Additional dose of labour and capital, applied to the same plot, thus gives diminishing returns.<sup>2</sup> This tendency is known as the Law of Diminishing Returns.

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1 The term "dose" of labour and capital was first used by James Mill who is followed by Marshall, and has now become a permanent acquisition to economic literature.

2 If things were not as they are in this respect, if we could increase the crop of a given piece of land indefinitely, upon the sole condition of proportionately increasing labour and expenditure, the tillers of the soil would not



It should be noted that the total yield does certainly increase after the application of every fresh dose. But since the return due to the application of each fresh dose is persistently diminishing, the total return increases at a diminishing rate or less than proportionately.

This Law of Diminishing Returns as applied to agriculture has thus been formulated by Marshall : "An increase in the capital and labour employed in the cultivation of land causes, *in general*, a less than proportionate increase in the amount of produce raised, *unless it happens to coincide with an improvement in the art of agriculture*". It should be carefully noted that the law relates itself to the *amount of the produce raised* and not to its price.<sup>3</sup>

The reason why diminishing returns are obtained from land is not far to seek. The productive capacity of the soil is limited and is subject to exhaustion. When the first dose of labour and capital is employed to a particular plot of land, it uses up a certain portion of the productive capacity of the land. The second dose, when employed, has less productivity to exploit as compared with the first dose ; consequently the yield due to the second dose is not so heavy as due to the first dose. This phenomenon goes on repeating itself with every successive unit.<sup>4</sup>

### Illustration

We shall illustrate this law by a concrete example. Suppose a cultivator has got a plot of land. He applies to it the first dose of labour and capital, which gives an yield of 90 tons of rice. The application of the second dose of labour and capital pushes up the total yield to 160 tons. When he applies the third dose, the total output is raised to 220 tons. The fourth dose similarly increases the total produce to 265 tons ; the fifth to 300 tons ; and the sixth to 320 tons. The application of each new dose increases the total output but the output due to each successive dose goes on diminishing. The first dose, in our illustration, produces 90 tons of rice. The first and second doses together produce 160 tons ; the second dose, therefore, produces only  $(160-90=)70$  tons of rice. Similar calculations will show that the third

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hesitate to do this ; instead of increasing the size of their farms, they would reduce them to the smallest possible area, because the smaller the area, the easier it is to manage a farm. The simple fact that things are not as we have just supposed, and that poorer and less favourably situated land is in fact constantly brought under cultivation demonstrates that in reality we cannot expect a piece of land under given conditions to yield more than a limited crop. —Charles Gide, *Principles of Political Economy*, pp. 95-96.

3 It is important to remember that the return to capital and labour of which the law speaks is measured by the *amount* of the produce raised independently of any changes that may meanwhile take place in the *price* of produce. —Marshall, *Economics of Industry*, p. 94.

4 Since diminishing returns are obtained at a fixed cost, the cost of production per unit goes on increasing. Hence this law is also styled as the *Law of Increasing Costs*.

dose yields 60 tons; the fourth, 45 tons; the fifth, 35 tons; and the sixth, 20 tons. These results are tabulated below :

Doses of Labour and Capital			Total Output (in tons)	Output due to each dose (in tons)
1st	..	..	90	90
2nd	..	..	160	70
3rd	..	..	220	60
4th	..	..	265	45
5th	..	..	300	35
6th	..	..	320	20

### Diagrammatic Representation

The law can be represented diagrammatically as follows :

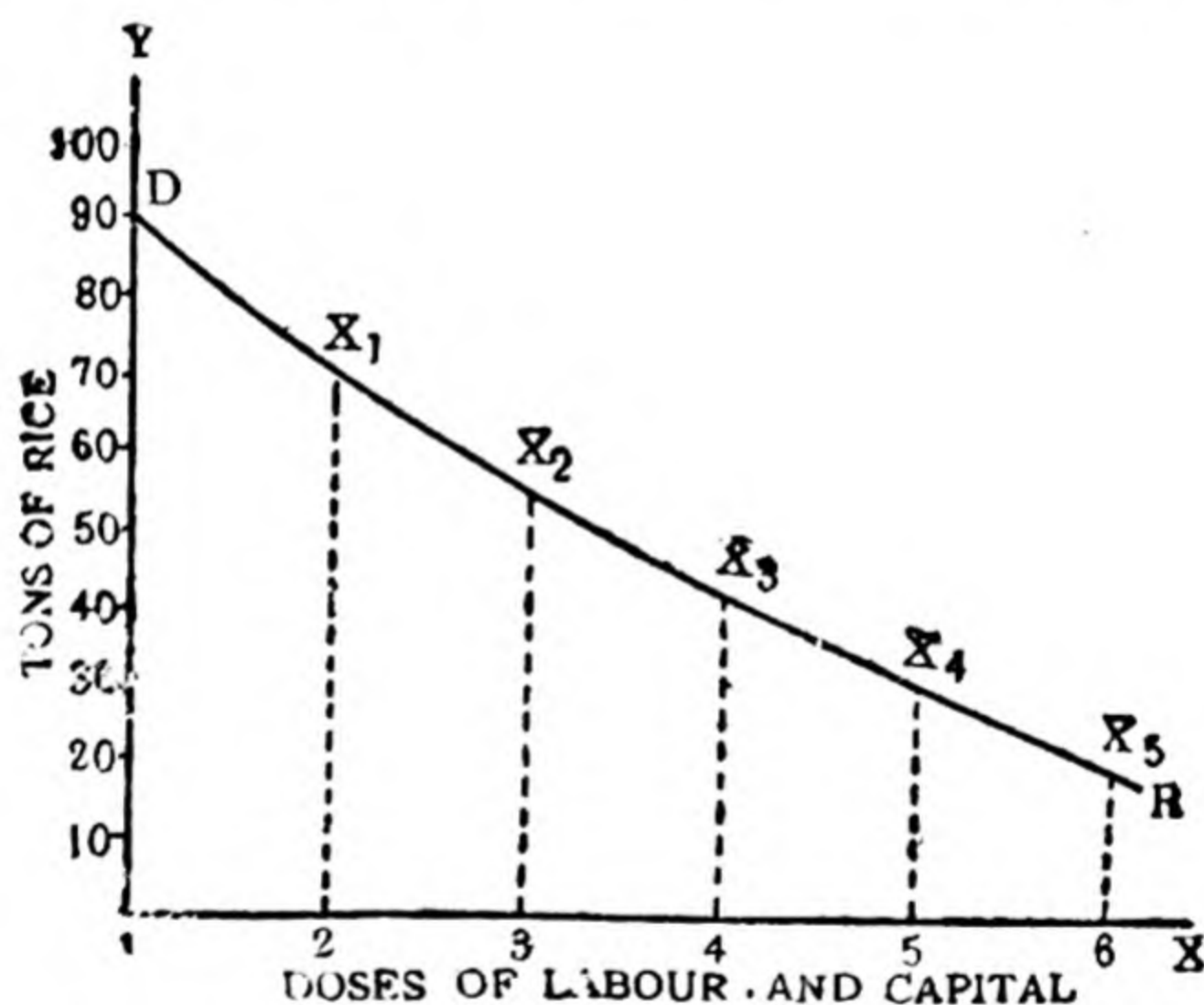


Fig. 26. Illustrating the law of diminishing returns.

In this figure doses of labour and capital have been measured along OX axis, and tons of rice along OY axis. The figures of the output due to the several doses as given in the above table have been plotted on the graph and the points have been joined. The curve DR is thus obtained. This is the curve of Diminishing Returns. It is a slopy curve which indicates that the returns due to each additional dose go on diminishing as the number of doses of labour and capital goes on increasing. OD line represents the return due to first dose;  $2X_1$  the return due to second dose;  $3X_2$  that due to third dose; and so on. These lines go on decreasing in size, thus illustrating the diminution in returns to successive doses.



## Limitation of the Law

The statement of the law as given by Marshall consists of two very significant expressions ; (i) *in general* and (ii) *unless it happens to coincide with an improvement in the art of agriculture*. These two expressions constitute the two limitations of the law and are discussed below.

(i) *In General*. The law of diminishing returns is true in general; but it does not operate if the land is under-cultivated, *i.e.*, if labour and capital employed on a plot of land are not adequate to use up fully its productive capacity. To give a concrete example, if a cultivator owns 1,000 acres of land and devotes negligible quantities of labour and capital to it, the productive capacity of that big plot will not be completely exploited. And if he applies another dose of labour and capital to that, the yield due to it may increase because of the fuller utilisation of the productive capacity of the soil. But once the stage of full cultivation, that is, full utilisation of the productive capacity of the land is reached, diminishing returns will certainly be obtained. The law sets in operation only after the point of full cultivation of land. If we consider the output obtained from a piece of land from the very beginning, we will find that the application of the first few doses gives increasing returns; to be followed by constant returns; after which diminishing returns appear. Fig 27 on the next page represents these varying tendencies ; AB represents increasing returns, BC constant returns, and CD diminishing returns. The stage of full cultivation is reached at the point C; and as is shown by curve CD—diminishing returns are obtained after this point. 'In general' drops a curtain over the phenomenon up to the dotted line O'C; and offers to our view simply CD curve, the curve of diminishing returns.<sup>5</sup>

(ii) *Improvement in the Art of Agriculture*. The law will operate only if the application of successive doses of labour and capital does not happen to coincide with an improvement in the art of agriculture. It is thus a static law and does not apply to progressive agricultural industry.<sup>6</sup> If means and methods of production continue to remain the same, the law is bound to operate. Improvements in the art of

5 Some writers feel that 'in general' means that law is generally true in a majority of cases, but there are a few cases in which it does not hold true. This interpretation of the term 'in general' is incorrect because there is not a single case in which the law does not operate.

The law of diminishing returns is presented as applying not to progressive agricultural industry as a whole, but merely to a particular area of land cultivated in accordance with the knowledge available at a particular time. It is a static law, helpful in accounting for the phenomena of any given period, such as migrations of population to new lands, the slow rate at which the wealth known to be contained in a particular time is taken out, or the failure to get every possible horse-power out of a waterfall, but not a law of progress. Some economists, it is true, have believed an analogous law of diminishing returns to hold good, every long period of time, of progressive agricultural industry as a whole. They admit that in the last one hundred and fifty years this law has not applied to progressive countries, since invention and discovery have kept well in advance of any tendency of population to increase or natural resources to become exhausted, but they maintain that these years have been highly exceptional.—Seager, *Op. Cit.*, 130-31.

agriculture, like the use of improved implements and machinery, utilisation of better fertilisers, and provision of improved irrigation facilities, counteract the tendency of the soil towards exhaustion; they may in some cases even increase its productive capacity, irrespective of the number of doses already applied to it; and cause successive doses to

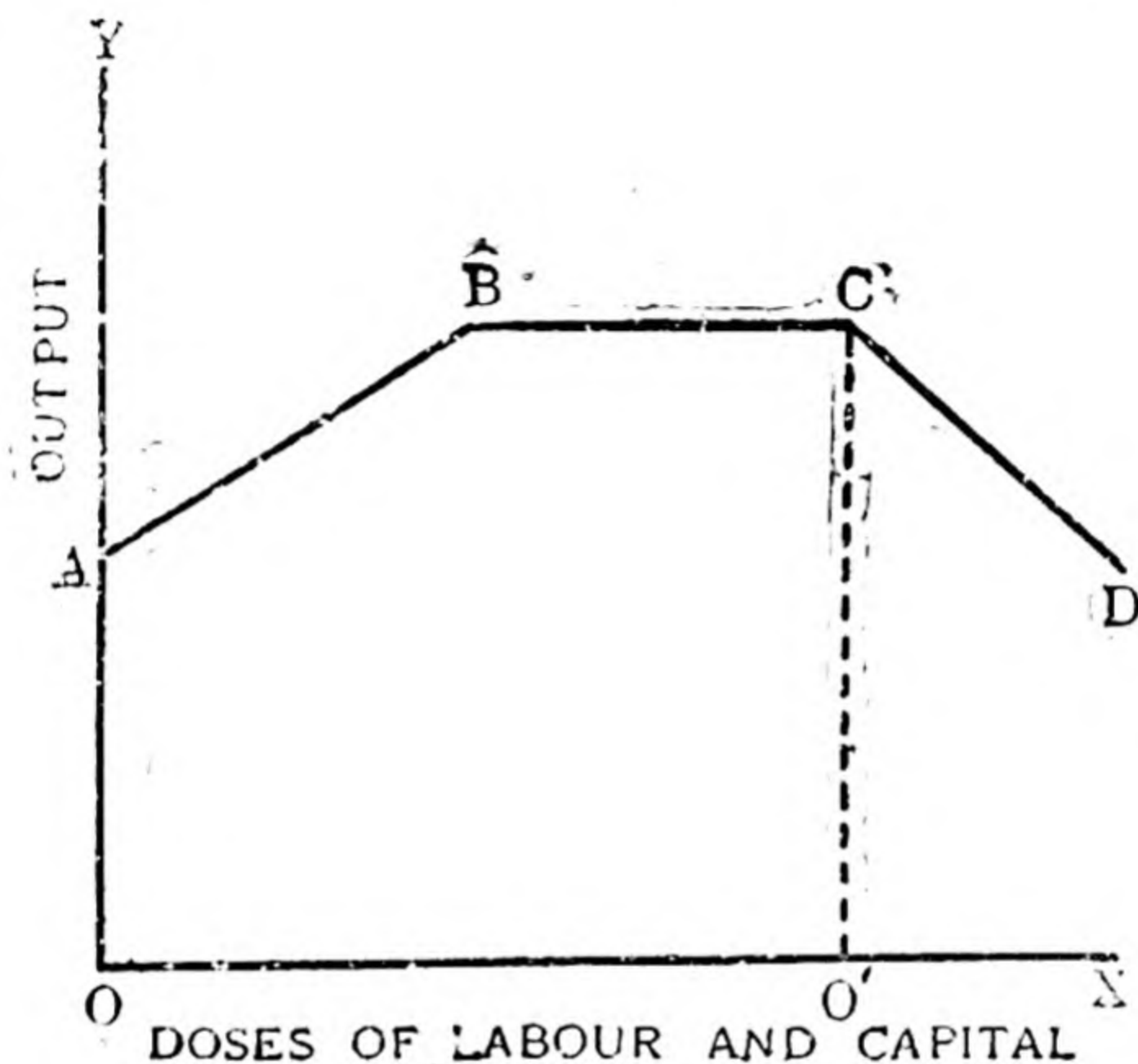


Fig. 27. Curve showing the varying tendencies of the Law of Returns.

yield increasing returns. The law, therefore, holds true only if no such improvement takes place.

The above are the two important limitations of the law. To these may be added another limitation, if we may venture to call it as such, namely, that it applies to the quantity of the produce raised and not to its price. As already remarked, the price of the produce raised is a factor with which we have got nothing to do here. It is the *quantity* of the produce raised which we have to keep in view.

### Decreasing Returns and Increasing Cost

In the above discussion we have focussed our attention on *return* due to each successive dose; and we have seen that this return goes on diminishing. But what happens to *cost per unit*? Does it increase when returns decrease? Yes, that is so. The explanation is simple. The cost of each dose is by assumption the same and unchangeable, hence when an additional dose gives less return it means that the incurring of the same cost results in a declining return. The cost per unit, as such, goes on increasing. This can be illustrated with



the help of the table given on page 161. Suppose the cost per dose is Rs. 100. This means that the cost per unit, when only one dose is applied, is Rs.  $\frac{100}{90} = \text{Rs. } 1.11$ . The cost per unit goes up to Rs.  $\frac{200}{160} = \text{Rs. } 1.25$  when the second dose is applied. Further results are set out in the following table :

Doses of labour and capital	Total cost Rs.	Total output Tons.	Cost per unit Rs.
1st	100	90	1.11
2nd	200	160	1.25
3rd	300	220	1.36
4th	400	265	1.50
5th	500	300	1.66
6th	600	320	1.87

If we plot the cost curve, it will show an upward tendency. In diagram 28, the CC' curve, which is the cost curve, is a rising one.

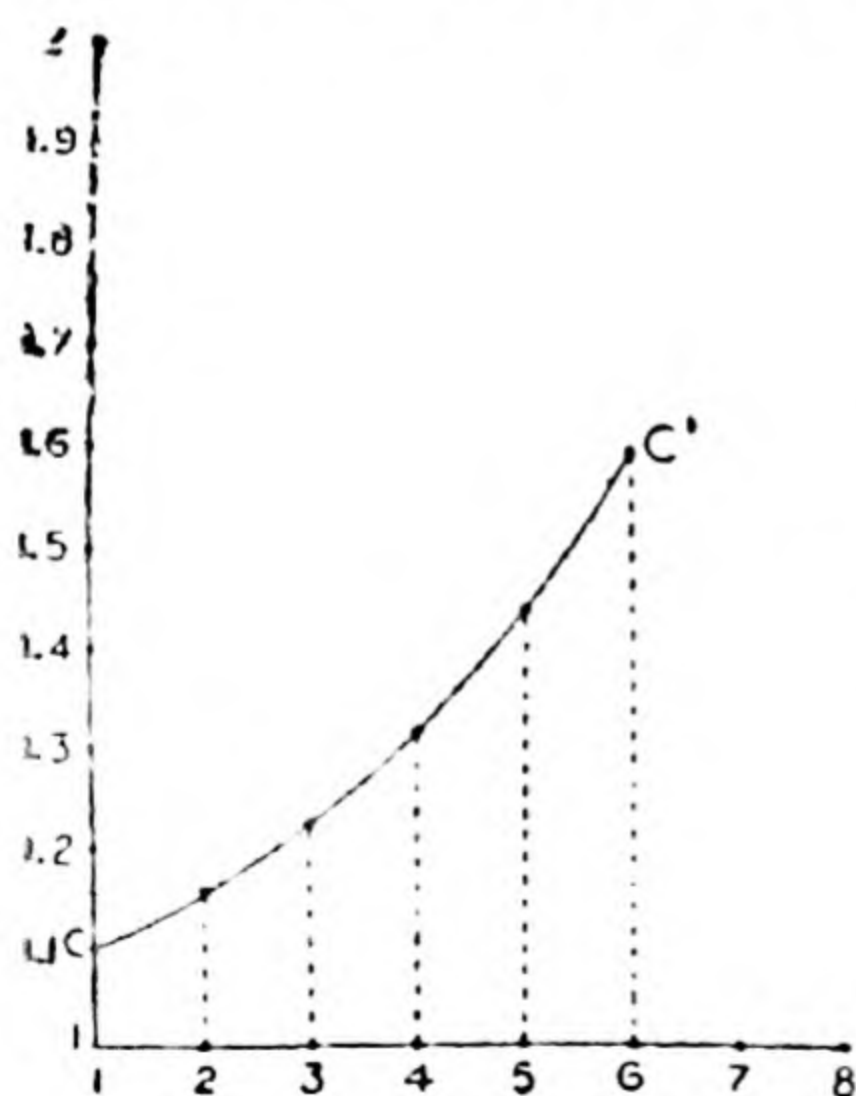


Fig. 28.

as below : In general, if one factor of production is kept fixed, the

It is thus clear that if we focus attention on cost per unit and not on return, we can say that *as we apply successive doses of labour and capital, cost per unit in general goes on increasing, unless there is a simultaneous improvement in the art of production*. In this shape this is known as the Law of Increasing Cost. The Law of Decreasing Returns, in other words, is also known as the Law of Increasing Cost.

### General Statement of the Law

We have discussed above the law of diminishing returns as applied to agriculture where it operates very forcefully and without exception. But it applies to other spheres as well. In general terms, it can be stated

application of every additional dose of other factors brings about diminishing returns, other things remaining the same.

### Application of the Law

In the above description of the law, we have studied its application to agriculture where it is universally true. At some time in the progressive cultivation of every field, sooner or later according to the state of agriculture, a stage will be reached after which every additional dose of labour and capital will result in diminishing returns. The law applies to various other industries as well. It applies, for instance, "to grazing lands, to the mine, the forest and the sea. It governs the cost of producing fish and whale oil; fuel and timber for manufactures; coal, iron and copper for the furnace and the forge; wool for clothing, and the carcasses of cattle and sheep for food". The more important applications of this law are discussed below :

(1) *Fisheries.* Fishing in ponds, tanks and lakes is subject to the law of diminishing returns. Just as the application of more doses of labour and capital uses up the capacity of the soil more and more, similarly every catch makes the fishing tank or lake less prolific, with the result that further efforts are not rewarded equally well.

Such is probably not the case with sea fisheries. Sea fish multiply so fast that fishing by men does not diminish their number. Thus fish known as *Long* lays 18,500,000 eggs in a year, *i.e.*, from 50,000 to 60,000 eggs per day. Other varieties of fish are also surprisingly procreative. Some writers, however, seem to hold the opposite view and feel that even sea fisheries are subject to the law of diminishing returns.

(2) *Mines and Quarries.* The law of diminishing returns operates in the working of mines and quarries as well. As the labour and capital applied in the working of a mine increase, the lower and deeper strata have to be dug. Deep digging requires elaborate, costly and laborious arrangements for proper lighting, for conveying air further inside the mine and for transporting the mineral to the pithead. The expenditure of each successive unit of labour and capital, as such, produces less than proportionate minerals.

(3) *Building of Houses and Shops.* The law is also applicable to the building of houses and shops. If more labour and capital are applied to a particular building, higher storeys will be raised. The wastage of material and time, and the cost involved in the construction of these storeys will go on increasing for bricks, lime, mortar and labour will have to be carried much higher than before. The application of each dose of labour and capital will, therefore, be rewarded less handsomely than the previous unit.

(4) *Pottery.* Even pottery is subject to this law. Earthenwares are made out of clay which is to be dug out. The deeper one has to dig up with a view to obtain clay, the more labour and time it requires. The return from pottery as such, begins to decline with the application of further labour and capital.

(5) *Manufacturing.* While agriculture is subject to the law



of diminishing returns, manufacturing is said to be subject to the law of increasing returns. This is, of course, true. But if the conditions under which the law is conceived to apply in agriculture are also present in the case of manufacturing, the law is bound to operate even in the latter. In agriculture we take land as fixed in quantity and other factors are increased in amount. Similarly, in manufacturing, if we keep one factor, say, labour or raw materials or capital fixed in quantity, and increase other factors, diminishing returns are bound to follow.

### § 3. THE LAW OF INCREASING RETURNS

Just as the law of diminishing returns is applicable to agriculture, similarly the law of increasing returns is applicable to manufactures. If we apply fresh dose of labour and capital to a manufacturing industry, each successive dose will yield increasing returns. This law of increasing returns has been stated by Marshall as below : "An increase of labour and capital leads generally to improved organisation which increases the efficiency of the work of labour and capital".

If we measure the doses of productive resources along OX axis and output along OY axis, the law of increasing returns will be represented diagrammatically by a curve like IR in the following graph.

The curve IR shows an upward tendency and the dotted lines go on increasing in length, which shows that the return due to each successive dose goes on increasing in amount.

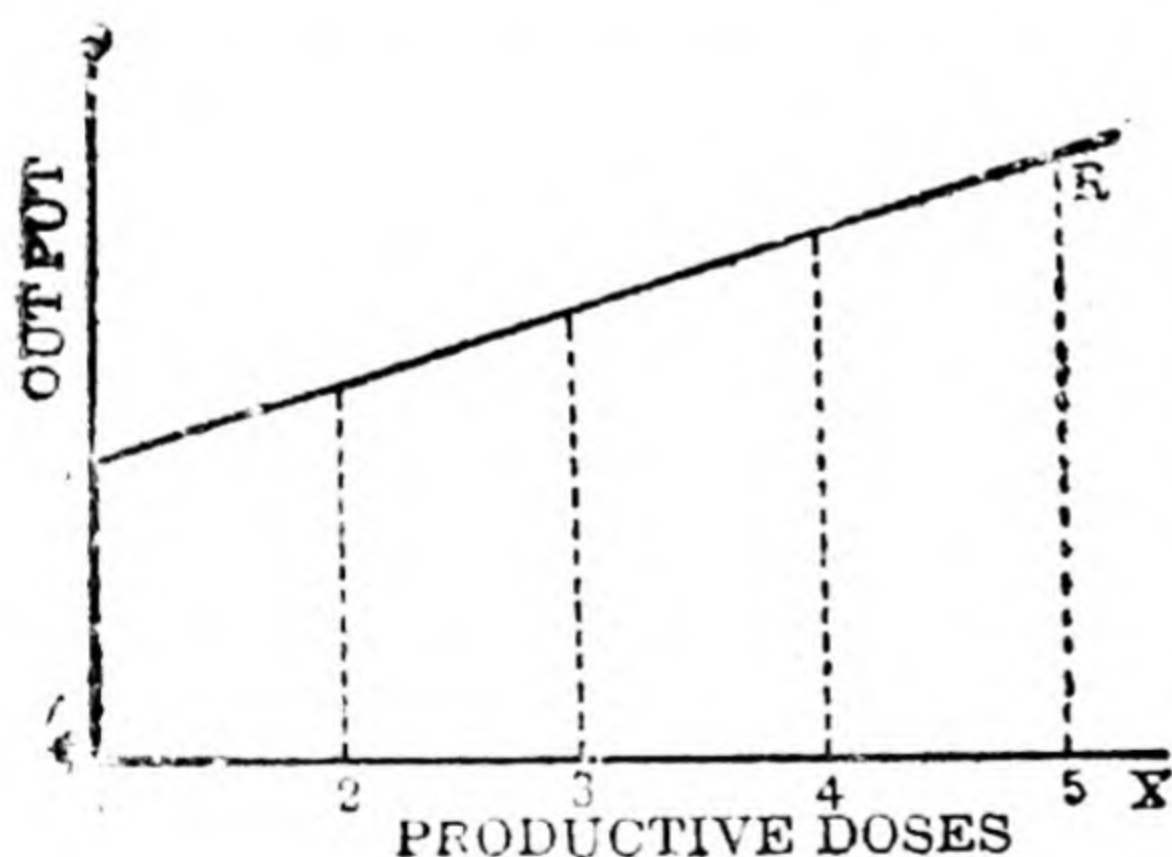


Fig. 29. Showing the Law Increasing Returns.

In manufacturing industries the law of increasing returns applies due to a variety of reasons. The application of fresh doses increases the scale of production so that all the internal and external economies of large-scale production are made available. Secondly, in a manufacturing industry the various factors of production can be combined in an ideal proportion. In the case of agriculture, one factor

of production, namely, land, remains, more or less, fixed, while the quantities of other factors are increased. There is no such limitation in the case of manufacture, since the supply of all the factors of production is elastic. The most profitable portion of the various factors of production can, therefore, be easily secured. Finally, new inventions and new processes of production appear so frequently and regularly in the sphere of manufactures that they push further away the point of diminishing returns. At any particular time, a manufacturing indus-

try knows certain methods of production and its productive capacity is definitely limited ; as such, an increase in the quantities of various factors is likely to set the law of diminishing returns in operation, sooner or later. But fresh inventions and new methods of production appear so swiftly in this field that before the point from which diminishing returns begin to be obtained is reached, some new improvement is made which pushes this point further away. This point is shifted forward so repeatedly and constantly that it rarely becomes effective.

### Increasing Returns and Diminishing Cost

It should be remembered that in the case we have discussed above increasing returns are obtained by the application of successive doses of labour and capital ; and as the cost of each dose by assumption remains constant and does not change, it follows that increasing returns are obtained at the same cost. In other words, the cost per unit goes on diminishing. [The reader is advised to take a practical example, work out the cost per unit and plot the cost curve. This curve will be a declining curve. This should be done on the same lines on which we worked out the whole thing in the case of the law of decreasing returns on p. 164 ante.] Hence this law is also known as the *law of diminishing cost*.

#### § 4. THE LAW OF CONSTANT RETURNS

When the application of fresh doses of productive resources results in an equal return due to each successive dose, the law of constant returns is said to apply. For instance, if the first dose produces 50 maunds of sugarcane, two doses may produce 100 maunds, three doses 150 maunds, and four doses 200 maunds : so that the return due to each dose is 50 maunds. If we represent productive resources along OX and output along OY, the law of constant returns will be shown by the curve CR, in the following diagram :

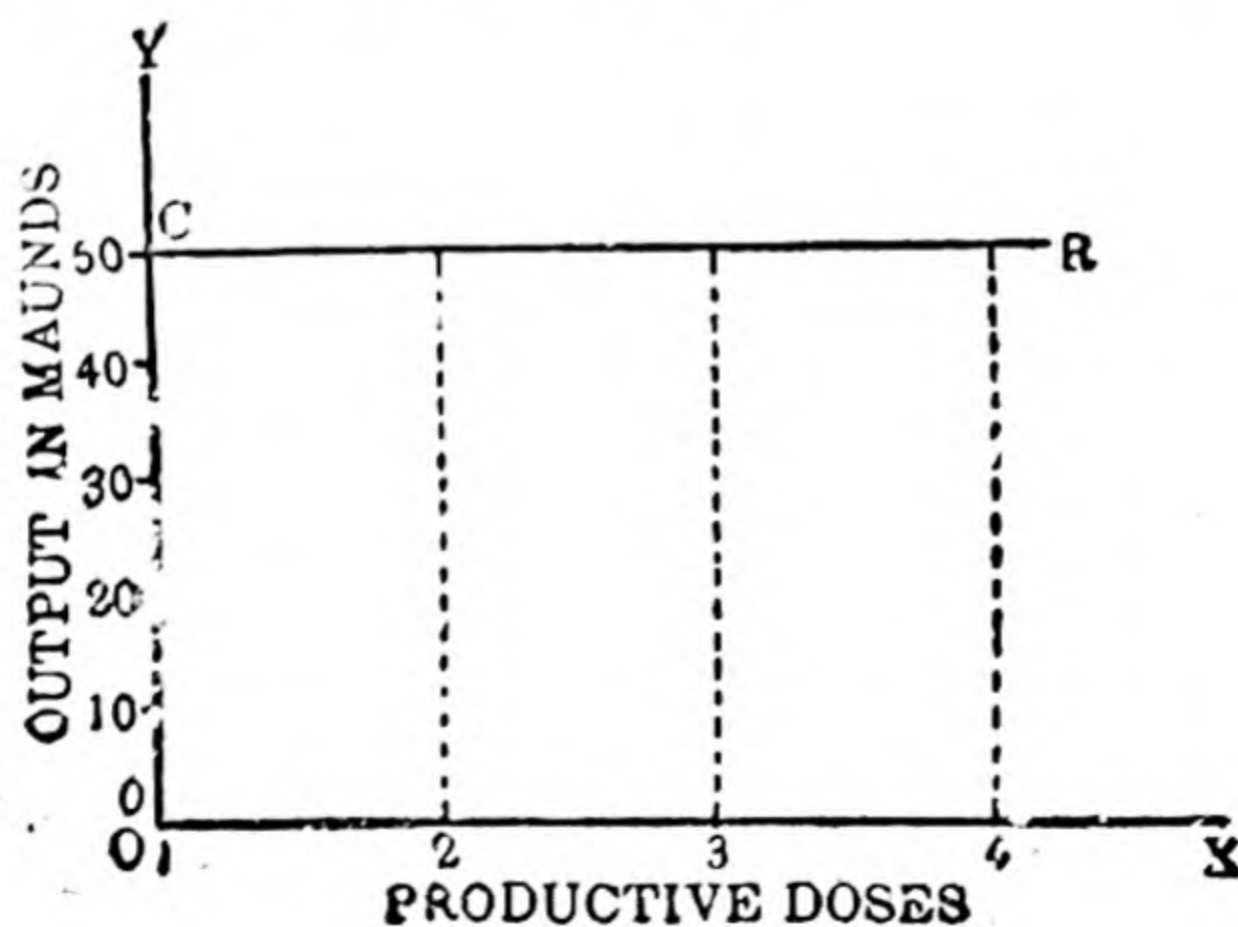


Fig. 30. Showing the Law of Constant Returns.



All dotted lines are equal, which shows that the return due to each dose is the same.

This law operates due to an exact counter-balancing of the tendency towards diminishing returns and the tendency towards increasing returns. This may happen, for instance, in a concern which manufactures sugar as well as grows sugarcane. The former is subject to the law of increasing returns, and the latter to that of the diminishing returns. These two tendencies may, in such a case, be exactly balanced so that constant returns may be obtained. Such cases, however, are rare in practical life. This law is, more or less, one of probability and of theoretical interest only.

Because the returns due to successive doses remain constant, here, it follows that the cost per unit also remains unchanged. Hence this law is also called the *law of constant cost*.

### § 5. NATURE AND THE LAWS OF RETURNS

#### **Marshallian Approach to Laws**

In the discussion of the above laws we have specifically mentioned the reasons why each of them sets into operation. Marshall approaches the problem from a different standpoint, namely, the part which Nature and Man play in production. Nature is always and everywhere economical. As such, where Nature plays a predominant role in production as it does in agriculture, diminishing returns are obtained. Man has been trying from the very beginning of his existence to subdue Nature and to prevent this tendency of Nature from operating. Where he is able to get the upper hand, as happens in manufacturing industries, increasing returns are obtained. In the words of Marshall, "While the part which Nature plays in production shows a tendency to diminishing returns the part which Man plays shows a tendency to increasing returns. If the actions of the laws of increasing and diminishing returns are balanced, we have the law of constant returns". In purely extractive industries, like agriculture and mining, Nature's contribution is supreme and, therefore, diminishing returns are obtained. In manufacturing industries, on the other hand, human control is prominent : therefore, increasing returns are obtained.

#### **Is There Only One Law of Returns ?**

There are some economists who maintain that there is only one law of returns and that is of diminishing returns. The other two laws, those of increasing and constant returns, are only conditions precedent to the operation of the law of diminishing returns. They are simply the passing phases : ultimately it is the law of diminishing returns which operates.

This point of view is not quite accurate. There are three distinct tendencies, of different types, and should be so distinguished. In a particular enterprise at any particular time, either the law of increasing returns or of constant returns may be in operation : and it would certainly be wrong to say, then, that it is the law of diminishing returns which is operating. It should, however, be recognised that these three laws are



intimately connected with each other. This, indeed, misleads some economists to make the above mentioned assertion.

#### § 6. THE LAW OF SUBSTITUTION OR EQUI-MARGINAL PRODUCTIVITY

We have discussed the laws of returns. There is another law of production which should also be included in our survey. This is called the law of substitution or of equi-marginal productivity.

An organiser combines the various factors of production in such a manner as to obtain maximum results out of the given resources. Maximum output at minimum cost per unit, is the ideal which he follows. The realisation of ideal proportions in which several factors should be combined, is a very difficult task ; and herein lies the real efficiency of the organiser. The ideal is achieved through a lengthy process of 'trial and error'. An organiser is always on the lookout of substituting a cheap and efficient factor of production for a comparatively costly and inefficient one. If his efforts are crowned with success and the said ideal is achieved, the marginal productivity of each factor will be found to be more or less equal. This law or principle is known as the law of substitution or equi-marginal productivity. The law of substitution, as applied to consumption, is known as the law of equi-marginal utility. As applied to production, it assumes the name of law of equi-marginal productivity.

There are numerous cases in which one factor is substituted for another. The following are some examples :

(1) An organiser, in need of more space for carrying on production, may either purchase more land or he may raise another storey at the top of the existing building. If he adopts the former course, he will substitute land for capital ; and if the latter, he will substitute capital for land. He will of course adopt the cheaper course.

(2) An organiser, desirous of increasing his output, may employ more labourers or purchase new machinery. If he does the former, he will substitute labour for capital ; and if the latter, he will substitute capital for labour.

#### INTERMEDIATE QUESTIONS

1. Explain clearly the Law of Diminishing Returns. Discuss the qualifications to which it is subject. (Andhra, Inter., 1950).

2. Explain the Law of Diminishing Returns with particular reference to urban building development and mining. (Andhra, Inter., 1944).

3. State and examine the law of diminishing returns. Under what conditions will production continue even after diminishing returns have set in ? (Bombay, I. Com., 1948).

4. "The variability of proportions in which the various factors of production can be combined has an important bearing upon the laws of production." Discuss. (Bombay, I. Com., 1949).

5. Discuss : "Nature and man constitute the foundation of economic life." (Bombay, I. Com., 1939).

6. State the law of Diminishing Returns, and indicate the extent of its application. (Osmania, I. A., 1952).



7. Explain the Law of Diminishing Returns. How can its effects be checked? (Osmania, I. A., 1951).
8. Explain the Law of Diminishing Returns and indicate the qualifications to which it is subject. (Osmania, I. Com., 1952).
9. Explain with illustrations the Laws of Returns. (Poona, I. A., 1949).
10. Describe the Laws of Returns. (Poona, I. Com., 1949).
11. "While the part which nature plays in production conforms to the Law of Diminishing Returns, the part which man plays in production obeys the law of Increasing Returns." Examine the statement carefully. (Punjab, Inter., 1949).
12. Define the law of increasing returns, and show why this law operates in the manufacture of goods, while the law of diminishing returns operates in agricultural production. (Punjab, Inter., 1948).
13. State and explain as clearly as you can, the Law of Diminishing Returns, and illustrate it by a diagram. Is the law universal? What are its limitations? (Raj., I. A., 1953).
14. Explain and illustrate the Law of Diminishing Returns. Why does it begin to operate earlier in agriculture than in manufactures? (Raj., I. A., 1951).
15. Explain the law of increasing returns and show how the law of diminishing cost follows from it. (Raj., I. A., 1944).
16. Narrate the Law of Increasing Cost. Why does it arise? (Raj., I. Com., 1953).
17. State clearly the Law of Diminishing Returns. What are its limitations? (Raj., I. Com., 1949).
18. State and explain the Law of Diminishing Returns. Why is it found operating more in agriculture than in manufactures? (Raj., I. Com., 1947).
19. State precisely what is meant by the Law of Increasing Returns. To what type of industry does it apply and under what conditions? (Travancore, Inter., 1943).
20. State and explain the Law of Diminishing Returns. What are its limitations? (Utkal, I. A., 1951 S).
21. State and illustrate the Law of Diminishing Returns. Explain its limitations. (Utkal, I. Com., 1951 S).
22. It is said that predominance of human and natural factors in production leads to the operation of the Law of Increasing and Diminishing Returns respectively. Explain. (Utkal, I. Com., 1950).

## CHAPTER 26

### GIFTS OF NATURE OR LAND

Much of the economy of society depends on the limited quantity in which some of the important natural agents exist, and more particularly land.—J. S. Mill.

#### § 1. MEANING OF 'LAND'

##### Definition of 'Land'

The term *Land*, according to dictionary, means the surface of the ground. In Economics, however, it is used in a wider sense to signify all the gifts of Nature, the surface of the ground being one of them. It includes :

- (1) the surface of the ground on which we live and move about;
- (2) The water covering that surface, e.g., rivers and oceans ;
- (3) the minerals hidden below the surface, like coal, gold, etc., and
- (4) air, heat , light and rainfall.

Soil and sub-soil on which crops grow, topographical construction, geographical location, climatic conditions, navigable waterways, waterfalls, winds, vegetable and animal resources, fisheries and mines, and natural harbours, are all included under *Land*. In other words, the term *Land* signifies the surface of the earth and the materials above and beneath it. As Marshall aptly observes, "By land is meant not merely land in the strict sense of the word but whole of the materials and the forces which Nature gives freely for man's use, in land and water, in air, light and heat."<sup>1</sup>

##### Land, Nature, and Gifts of Nature

It will probably be felt by the reader that the use of the term *Land* in this wide sense is somewhat confusing and misleading, especially to a beginner. If he comes across this term in a book on Economics, he may take it in the literal sense to mean the surface of the earth, whereas it may actually signify much more than that. To avoid this possibility of confusion, some economists have begun to use the expression *Gifts of Nature* in place of *Land*. The term *Gifts of Nature* describes the scope and meaning of this factor of production quite comprehensively and is definitely superior to *Land*. There are some writers who also use the term *Nature* for *Land* ; but since *Nature* is a word having various shades of meaning, its use is not very advisable.

In the following pages, however, we have made use of the term *Land* in preference to *Gifts of Nature* which is probably the best name that can be given to this factor, because through long usage *Land* has come to occupy a unique position in economic literature and has been used by most economists. It is, therefore, necessary that students

<sup>1</sup> Marshall, *Principles of Economics*.



should be familiar with its use in the economic sense. Moreover as Professor Ely observes, "Of what belongs to external nature, it is with land that we have principally to do in Political Economy." This lends further support to the use of the term *Land*.

## § 2. CHARACTERISTICS OF LAND

Land has certain distinctive characteristics which can be easily pointed out :

(1) *Fixity in Quantity*. Land is fixed in quantity and cannot be increased. The area of India is 1.2 crore square miles and cannot be increased. If a mine has one million tons of iron, it cannot be made to yield two million tons. Howsoever we may want abundant sunshine or rain, we must be content with what reaches us by natural processes. Sometimes the available land can be increased by such means as filling in swamps or by making terraces on the mountains. But this is simply a case of the conversion of potential land into effective land and not an increase of total land. This characteristic of fixity in quantity is not shared by other factors of production, all of which can be increased or decreased.

(2) *Land is not Produced*. Land is a gift of Nature and is not produced by man. As such, so far as society is concerned, land has no cost of production and, therefore, no value; but so far as individuals are concerned, land does have value and is purchased and sold like any other commodity.

(3) *Passivity*. Land is a passive factor of production. It does not take an active part in the process of production but is itself acted upon by men and machinery. 'In production man is the directing, active agent; Nature the obedient, passive agency.'

(4) *Varying Suitability*. All land is not equally suitable for all purposes. The land in the heart of a city is suited to the construction of buildings; a damp plot lying about in a village is suited to the growth of cotton or sugarcane or jute; whereas a comparatively dry land with cold climate is meant for wheat.

(5) *Effect of Location*. The value of land is governed, to a great extent, by its *location*, and by the means of communication between it and other lands. Lands nearer to towns fetch higher rents than those farther away. The value of labour and capital is also affected by distance, but not to the same extent<sup>2</sup>.

## § 3. EFFICIENCY OF LAND IN PRODUCTION

Land is a primary and indispensable factor of production; without land no production is possible. However man may exert himself, even with the aid of all the machinery and skill that he can gather, he can produce nothing unless there is land to which his efforts can be applied. It is land from and out of which we obtain the numerous

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<sup>2</sup> Students may find two other characteristics mentioned in the books. They are : (1) Land is permanent. It does not wear out. This is, however, true of the area of land surfaces and not of its fertility or other gifts of Nature. (2) The location of land is fixed. This again is true of land surface alone.



commodities and forces which make our life complete. From the soil we get the foodstuffs which keep us alive, and the agricultural raw materials which feed the manufacturing industries. Mines similarly provide us with valuable raw materials like iron, coal, copper and others worked upon in the factories and converted into useful articles ministering to varying human wants. Forests, again, afford timber; and oceans fish. Even such natural forces as water and electricity are harnessed by human beings for the production of wealth. It is on the surface of land that all our transport lines run; and even in the air we move about in aeroplane.<sup>3</sup> The function of land in production is, therefore, supreme. The importance of land can be well appreciated from the fact that all the rich countries of the world are the ones which have been endowed with plentiful gifts of Nature.<sup>4</sup> If U. S. A. is the wealthiest country, it is because she has enormous agricultural, mineral and industrial resources. The same truth applies with full force to Great Britain, Germany, Japan and others. India is unfortunately a country which is very poor in spite of its being liberally endowed with gifts of Nature, because the latter are not systematically exploited to maximum advantage. It is, however, hoped that with the passage of time this unfortunate feature of our economy will be corrected.

#### § 4. EFFICIENCY OF LAND

Efficiency of business unit, we have seen, depends upon the efficiency of each factor of production it makes use of. As land is a very important factor of production, its efficiency is a fundamental necessity for securing the efficiency of the entire productive process. By efficiency of land is meant its suitability for the purpose to which it is put. Efficiency is measured by productivity. Other things remaining the same, the land which yields larger output is more efficient than the one which yields less output. The efficiency of land depends upon the following conditions:

(1) *Natural Conditions.* Natural conditions, to a large extent, determine the efficiency of land. Of these conditions, the character of the soil, the climate and the sub-soil water are the most important. Some of these factors can be controlled by human beings. The character of soil, for instance, can be partially changed through fertilisation, irrigation and otherwise. The climate cannot be changed, but can be modified through afforestation, construction of glass-houses and use

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3 The chief ways in which land helps in production are as follows. (1) It affords *support* for man and the buildings erected on it. (2) Its *extension* permits the movement of men and goods from place to place. (3) Its *geographical features*, mountains and rivers, etc., aid in many ways. (4) It supplies the *materials*, vegetables and animals, from which all commodities are made. (5) Each portion of it enjoys its share of summer's heat and winter's cold, air, sunshine and rain, without which no form of life could long continue on the earth. See Seager, *Op. Cit.*

4 The countries of the world most favoured by nature are evidently those whose soils bring forth the most common necessities of life of the best quality and in the largest quantity. In these countries the manufacturing power specially prospers, by means of which the nation attains to the highest degree of mental and social development and of political power.—List, *The System of National Economy*, p. 131.



of humidifiers. The deficiency of sub-soil water can also be made good through artificial irrigation. But in all such cases the results are achieved through the application of labour and capital to land and cannot be reckoned as Nature's bounty.

(2) *The Organising Ability.* The efficiency of land also depends upon the manner in which it is used in the process of production and the way in which other factors of production are combined.

(3) *External Conditions.* Then there are some forces and factors working from without which also affect the efficiency of land. Nearness to the market, the existence of cheap and quick means of transport and such other factors fall under this category. External conditions are very important in determining the efficiency or otherwise of land. It may be that a plot of land is inefficient today because it is far removed from markets and because the means of transport joining it with them are not adequate and efficient; but if after some time the means of transport are so much developed that the land is practically drawn to the markets, it may suddenly acquire efficiency.

#### § 5. EXTENSIVE AND INTENSIVE CULTIVATION

The cultivator of a given plot of land obtains, more or less, a definite quantity of yield at any particular time. If he wants to increase his produce, he can either (1) bring more land under plough, or (2) apply more labour and capital to the same plot of land. The adoption of either of these two methods will increase the output.

In the former method, the area of cultivation becomes more extensive than before; hence it is known as extensive cultivation. In the latter case, the same plot of land is operated upon by more labour and capital than before; in other words, cultivation becomes intensive. This method of cultivation is, therefore, known as intensive cultivation.<sup>5</sup>

A cultivator wishing to increase his output may follow either of these two methods; but which method he should select out of these two, is more or less a question of cost. If he finds that additional produce can be raised more cheaply by following extensive cultivation than by following intensive cultivation, he will adopt the former method. If, on the other hand, intensive cultivation seems to be the cheaper method, he will naturally adopt it. In case land is so plentiful that it can be had at a nominal cost while labour and capital are comparatively dear, extensive cultivation will be the cheaper method for the obtaining of increased output. The progress of all the countries of the world shows that in early times whenever men felt the necessity of increased agricultural output for supporting increasing population, they resorted to extensive cultivation because land was obtainable in those times merely for the asking. In America the early settlers followed the wasteful process of cultivating a plot of land, to be readily aban-

5 It may be repeated here that all the factors of production are, of course, increased when increased output has to be obtained. But in extensive cultivation, it is chiefly land which is increased, other factors are increased much less than proportionately. In the case of intensive cultivation, on the other hand, land remains fixed in quantity while other factors are increased.



done, as soon as its yield deteriorated, in favour of a new and virgin land. This method was condemned as "earth butchery", and was an extreme example of careless extensive cultivation. But if the land is rare due to pressure of population while labour and capital are comparatively cheap, intensive cultivation is preferred to extensive cultivation. In recent times population has tremendously increased and land values have sprung up sky-high, with the result that intensive cultivation has made rapid progress in almost all the countries of the world. In Denmark and Holland in particular, where population is very dense in comparison to the area available, highly intensive cultivation has to be practised. In the most thickly populated countries of the world, namely, India and China, intensive cultivation though so far held in check by ignorance and poverty, is becoming common.

It must not, however, be supposed that a country either follows intensive method or extensive method. That is not so. As a matter of fact, extensive and intensive cultivation go side by side in a country for certain length of time; and while afterwards intensive cultivation may become the more important method, extensive cultivation lingers on for considerable period and it is rare that it entirely vanishes. The application of intensive method depends mainly upon (i) increasing population and (ii) technical improvement. In the earliest stage of habitation, population is small and technical knowledge limited; hence extensive method is adopted. But as population increases, intensive cultivation becomes growingly necessary and improvements in technique make its adoption possible. At this stage intensive cultivation begins to get popular. In certain cases cultivation may be very backward so that they cannot adopt intensive cultivation. This is the case, for instance, in India. In such a case the speed at which intensive cultivation is adopted will be slow. Nevertheless, the tendency is towards a greater adoption of intensive cultivation; and this tendency gets stronger as population increases further and technical improvements are adopted on a wider scale. And, indeed, we can think of a country where everybody adopts the intensive method. But this is perhaps an imaginary case, as much remote from existing reality as a country which follows only extensive method. In most of the countries today *intensive and extensive methods generally go hand in hand.*

### INTERMEDIATE QUESTIONS

1. Write a short note on Intensive and Extensive Cultivation. (Raj., I. A., 1951).
2. What are the factors that affect the productivity of agricultural lands? (Raj., I. Com., 1947).
3. Define Land. What are the factors that affect the productive efficiency of agricultural land? (Raj., I. Com., 1946).
4. Define Land. What are the peculiarities of land as a factor of production? (Utkal, I. A., 1951 S).



## CHAPTER 27

### LABOUR

Since the essence of production is that it leads to the satisfaction of utilities, it follows that any labour or effort that yields utilities is productive. The musician whose performance brings us pleasure does precisely the same sort of thing as the flowers whose blossoms last for a few hours.—*Taussig*.

#### § 1. MEANING OF LABOUR

The second factor of production is known as *Labour*. It is, like land, indispensable for production. No production, from the simple form of plucking fruits to the extremely complicated form of manufacturing cars and aeroplane, is possible without labour. You find labourers working in small workshops and in big factories, in fields and in business shops, on docks and at railway stations. Though in the present age, much of the human labour has been substituted by machinery, still some labour has to be used even in the most mechanized establishments. Machinery themselves have to be operated upon by human labour.

The word *labour* is of common occurrence. In everyday speech it refers to the exertion involved in the performance of a work. The economic sense of the term labour is, however, not so wide. Firstly, it includes the work done by human beings only, and excludes the work done by animals. The bullock which draws a bullock-cart, the dog which keeps a watch all through the night, and the donkey which carries the washerman's load every day, all exert themselves but their exertion is not regarded as labour in Economics.

Again, human effort of each and every kind is not 'labour'. Since Economics studies only those human activities which have relation to wealth, *labour refers to only that form of human exertion which is undertaken with a view to obtain wealth or to earn an economic reward*. The exertion made without any economic motive but simply to derive pleasure or to perform some duty towards one's relations or country, is not labour. When you play tennis in the evening, you certainly exert yourself ; but since your object is not to earn money but simply to keep yourself hale and hearty, it is not labour. The marker, however, who teaches you how to improve your game, does so for earning his livelihood and his exertion will certainly be called labour. When you go for a picnic along with the servants who carry the needed articles, you do not labour but the servants do.

Jevons defines labour as *any exertion of mind or body undergone partly or wholly with a view to some good other than the pleasure derived directly from the work*. Marshall has quoted this definition with approval.<sup>1</sup>

It should be remembered that the word labour is used in Eco-

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<sup>1</sup> Marshall, *Principles of Economics*.



nomics in the abstract sense as well as in the concrete sense. In the former sense, labour refers to human exertion (as defined above) while in the latter sense, it refers to labourers. The word labour is thus made to apply sometimes to the exertion which a labourer has to undergo and at others to the labourer himself. Students should clearly distinguish between these two meanings of the term.

## § 2. CHARACTER OF LABOUR

Labour, as a factor of production, has certain distinct characteristics which may well be remembered:

(1) Labour is indispensable for production, no production being possible without its aid. Even the richest gifts of Nature and enormous stocks of capital cannot produce wealth unless human beings exert themselves and harness them for the purpose.

(2) Labour is perishable. It is lost with the passage of time. If a labourer does not exert himself on a particular day, the labour of that day is lost for ever and cannot be regained.

(3) Labour is not only a means of production but is also its end. Labourers not only help in the production of wealth but they are also the persons for the satisfaction of whose wants production is carried on.

(4) Money can be invested in labour. Money spent in the acquisition of skill, education and physical power does not differ from the money invested in the purchase of factories and machines. Both yield an income. Hence labour is sometimes called 'human capital'.

## Land and Labour

Land and labour are both indispensable factors of production, but there are some vital differences between the two. Firstly, land is a passive factor of production and is acted upon by man and machinery; while labour is an active factor of production and makes use of other factors in the productive process. Secondly, land is strictly limited in quantity—it cannot be increased or decreased; but the supply of labour can be increased or decreased. It can be increased by increasing birth rate or efficiency of labour or both; it can be decreased by reducing the birth rate or efficiency or both.

## Labour and Capital

Capital and labour have close relationship. Capital is nothing but 'crystallised labour'. It is just that part of wealth produced by labour, which is used in further production of wealth. But there are certain well-marked differences between the two. Firstly while labour and capital are both destructible the former is capable of recuperation more frequently than the latter. Secondly labour perishes sooner than capital. Labour deteriorates rapidly even when unused. A worker tends to grow with advancing age whether he is idle or busy. Capital, however, does not deteriorate so rapidly. Thirdly, capital can be transferred from place to place and from occupation to occupation more easily than labour. A man who has one lakh of rupees in the State Bank of India can send it in no time to London or New York or Berlin; and an owner of an iron and steel company can sell it any time and reinvest



his capital in cotton textile company or sugar company according to his choice. But the U. P. labourer will think several times before making move to Madras or to Ahmedabad. Finally money invested in machinery can be easily withdrawn by its sale, but the money invested in education and skill cannot be so easily got back.

### § 3. IMPORTANCE OF LABOUR

Labour is an indispensable factor of production. In simple as well as in complex forms of production some kind of labour is inevitably involved. Everywhere on the face of the earth, man lives by the sweat of his brow. Even when Nature is bountiful in her gifts and human wants are as simple as they are few, some exertion is necessary for the acquisition of desired articles. If fruits are wanted, they must be plucked ; if flesh is desired, animals must be killed. And as we move from the places where natural resources are rich and extensive and climatic conditions favourable, to places where natural wealth is meagre and climate unfavourable, the importance of labour increases tremendously.

Compulsion to labour has indeed been the source of the civilisation itself. Man instinctively tries to work as little as possible. He has been making endeavours to avoid labour from the very beginning by several means like the invention of machinery and the introduction of division of labour. This tendency is called *law of least effort* and is the foundation of economic progress. "It has been very well said that man works prodigiously to avoid work, exactly as it has been said that he has waged war so as to avoid future wars though he does not seem to have succeeded much better in the one task than in the other. It looks like a fool's game that he is playing—undergoing all sweating toils to make his task easier. But this fool's part that Nature makes him to play is really a blessing. It is fortunate that the object he aims at is always attained he stops only when work becomes no more than 'the buzz of the bee or the chirping of the bird' that it will become the attractive labour that was the ideal of that admirable socialist, Fourier."<sup>2</sup>

### § 4. KINDS OF LABOUR

Labour may be classified into (i) productive and unproductive labour, (ii) skilled and unskilled labour, and (iii) mental and manual labour.

#### **Productive and Unproductive Labour**

Labour may be productive or unproductive. Since production means creation of utilities, all the labour which results in the creation of some utility is called productive while that which fails to do so is known as unproductive. For instance, the labour devoted to the writing of a book is productive if the book is published and brings profit to the author and publisher ; but if the book is not published, the labour involved in its writing is wasted and is, therefore, unproductive.

<sup>2</sup> Charles Gide, *First Principles of Political Economy*, (Row's Translation from the French), pp. 19-20.



Which labour is productive and which unproductive, has long been the subject of discussion among economists. Early French economists, called Physiocrats, held that the labour of agriculturists alone was productive ; the labour of people other than agriculturists was unproductive. Later on Adam Smith, the father of modern Economics, extended the scope of the term productive labour and included in it all the labour which results in the production of *material objects*. According to him, the labour of a potter is productive but of a musician unproductive ; the labour of a cook is productive but that of a teacher unproductive. But it will be appreciated that the labour of all the above persons is after all an exertion of body or mind and is of the same nature. It is, therefore, rather illogical and arbitrary to call the labour of some of them productive and that of the others unproductive. Modern economists, therefore, define the term productive labour as the labour which results in the production of some utility, whether that utility is embodied in some material object or not.

### **Skilled and Unskilled Labour**

Labour may be skilled or unskilled. Skilled labour is that which requires some special skill and training in its performance. The labour which can be performed without any sort of special training is called unskilled. The labour of a domestic servant and of a *chaprasi* is unskilled, but the labour of a motor-driver, engine-driver, a musician and a dancer is skilled.

Skilled labour is, as a general rule, highly paid because skilled labourers have to undergo special training, their supply is usually small and the demand for them is comparatively great. Unskilled labour, on the other hand, is poorly remunerated because of the absence of special training, its abundance, and a comparatively small demand for it.

There is a certain degree of competition between skilled and unskilled labourers. If a skilled labourer is thrown out of employment, he can take up an unskilled job and thus compete with unskilled labourers. But unskilled labourers cannot compete with skilled labourers for specialized and skilled jobs.

It is rather interesting to observe that as industrial, mechanical and general intelligence is increasing, the gulf between the skilled and the unskilled labour is tending to be bridged over. In fact, the term skilled is relative to the conditions of a country. For instance, ability to read and write is regarded as skill in India but not in America where most of the people are educated. In our country education is making slow but steady progress ; and as it tends to become the possession of the majority of men and women, it will cease to be considered skill.

### **Mental and Manual Labour**

A very common classification of labour distinguishes mental labour from manual or physical labour. It must, however, be recognized that instances of purely mental or purely manual labour are extremely rare. The purest instance of mental labour involves some physical labour, and the purest instance of physical labour involves some mental labour. The philosopher must move his tongue and limbs



if he wants to express his ideas to others, while the roughest ditch-digger must exercise some intelligence in the performance of his task.

### § 5. SUPPLY OF LABOUR

We shall now consider what is the total supply of labour in a country and how it is measured. It appears at first sight that the supply of labour is equal to the number of labourers. But this is not exactly true, because labour power depends upon two factors: (1) the number of labourers ; and (2) the efficiency of labourers. Suppose a country possesses 10 crores of labourers while another country possesses 20 crores of labourers. If the labourers of the first country are twice as efficient as the labourers in the second country, the labour power in both the countries will be equal. Evidently, labour is a two-dimensional entity, its dimensions being measured by (i) number of labourers and (ii) their efficiency. The quantity of labour and the efficiency of labour form the subjects of the succeeding chapters.

### INTERMEDIATE QUESTIONS

1. Define productive labour. Is the labour of the following persons productive : (a) a cabinet minister, (b) an armament manufacturer, (c) a student reading for his examination, and (d) a mother looking after her children ? (Bombay, I. Com., 1939).
2. Write a note on Productive and Unproductive Labour. (Madhya Bharat, I. A., 1953).
3. Distinguish between Productive and Unproductive Labour. (Poona, I. Com., 1950).

## CHAPTER 28

### QUANTITY OF LABOUR : MALTHUSIAN THEORY

Just as Darwin shocked traditional theology regarding the origin, so Malthus offended it in respect of the continuance of the human species.—*Nicholson*.

#### § 1. THE SIZE OF POPULATION

The number of men, women and children living in a country at any particular time constitute the size of population. The size of population is determined by natural factors, *i.e.*, births and deaths, and by migration.

##### 1 Natural Factors

Births increase the population of a country while deaths decrease it. These are the two natural factors which go to determine the size of population of a country.

##### (a) Birth Rate

Birth rate expresses the number of children born per 1,000 persons living in a country during a given time. Births increase the size of population, if other factors remain the same ; as such, the higher the birth rate, the greater the rate of increase of population. It is evident that if 30 children are born in a year among a thousand people in one country, and only 15 in a thousand among another country, the population of the first is likely to increase more rapidly than that of the second. The factors determining birth rate are not fully known but the more important of them may be discussed here :

(i) *Climate*. In hot countries people become mature at an early age and marriages take place fairly early, while in cold countries people mature late and marriages take place at a fairly advanced age. Naturally the number of children born during the lifetime of a couple is larger in a hot country than in a cold country.

(ii) *Religious Customs*. Where religion has a great hold on the masses, it plays an important part in determining the birth rate. In our country, for instance, religion enjoins that a girl should be married before she attains puberty, with the result that she gives birth to a large number of children during the period of her married life. Birth rate is thus greatly increased.

(iii) *Social Causes*. Social customs also determine birth rate. Formerly people used to take pride in a large family which was an important means of enhancing social prestige ; birth rate was, therefore, very high. But late marriages have now become customary in this country, especially among the educated classes. A large family is now generally looked down upon and is considered to be a sign of carelessness, if not of poverty, of a couple. Such considerations have a diminishing effect on the birth rate.

(iv) *Political Conditions*. The Governments, in some countries,



encourage large families as a definite state policy. In Germany and Italy, for instance, the Fascist Governments used various methods to inculcate in the people a desire to have more children. Such state inducement is likely to lead to a high birth rate, other things remaining the same.

(v) *Economic Conditions.* The desire to marry is also influenced by the standard of living of the people. Intelligent and foresighted young men and women have begun to postpone marriages until they are able to support a big family. Even when they are married, the high standard of living checks a rapid rise in the birth rate. This is not the case when the standard of living is low. Poor children cannot be sent to school; on the other hand, they easily find employment in factories or shops and begin to earn their upkeep. Economic independence induces them to marry early and settle down in life. The low standard of living thereafter leads to indiscriminate birth of children. The general tendency among the educated classes in this country, however, is to postpone marriage till the education of the boy is complete. Such consideration is, however, not given to the marriage of girls.

### (b) Death Rate

By death rate is meant the number of persons dying per 1,000 persons living in a particular country during a given period of time. Other things remaining the same, the higher the death rate, the lower the rate of increase of population. If in one country 30 persons die in a year out of a thousand, and in another only 15 die, obviously the latter will increase more rapidly in population than the former. The factors determining the death rate are the following:

(i) *The State of General Progress.* General progress reduces death rate. Educated and progressive persons take proper care in keeping their children neat and clean, and themselves lead a healthy life. They are particular about nutritious food, neat clothing, tidy shelter and other healthy requirements of proper living. As such they live long and do not fall an easy victim to various major and minor diseases. In India, however, most of the people are uneducated and backward and rarely take such considerations into account. They fail to lead a healthy life, die at an early age, and suffer from diseases so long as they live.

(ii) *The Age of Marriage.* If a couple is married at an early age and children begin to be born immediately thereafter, the physique of the husband and the wife is badly damaged and their life is shortened. Their children are also weak and many of them are carried off even before they are one year of age. This is what commonly happens in our country.

(iii) *Natural Calamity.* Natural calamities like earthquakes, floods and others take people unawares and are difficult to be handled. They increase deaths quite suddenly and considerably.

(iv) *Poverty of the Masses.* It disables them from getting nutritive food, proper clothing and fair shelter. The poor have small power of resistance and whenever they catch some disease, they



are seriously weakened. The death rate under such circumstances is usually high.

In India death rate is very great. The major and minor diseases that very often break out, take a heavy toll of human beings. The female and infantile mortality is particularly disastrous.

### (c) Survival Rate

Increase in population due to natural factors is determined by excess of the birth rate over the death rate. This is called the 'survival rate'.

Population is said to be *static* when the births and deaths taking place in a country per year are equal so that the population remains unchanged. The population of France during the last decade remained more or less static. When births and deaths take place in such numbers that the population either increases or decreases, the population is said to be *dynamic*. When the population tends to increase, the dynamics is said to be *positive*; and when it tends to decrease, the dynamics is said to be *negative*.

## 2. Migration

The movement of people from one country to another is known as migration. Migration from a country is known as *emigration* while migration into a country is known as *immigration*. Emigration and immigration are important factors in the determination of the size of population of a country. The excess of immigration over emigration which may be called the *rate of net migration*, increases the size of population. If, on the other hand, emigration exceeds immigration population decreases. U. S. A., Canada and Australia have gained greatly in population by the large number of immigrants, while Ireland had her population reduced by emigration. In our country migration is not an important factor in the determination of the size of population. Immigration into India is practically non-existent while the colour prejudice and the bad treatment accorded to Indians abroad discourage emigration.

### § 2. THE MALTHUSIAN THEORY OF POPULATION

People of all ages have given some thought to the problem of the growth of population. The modern thought on the subject began from the year 1798 when Malthus, a clergyman and a Cambridge wrangler, published his celebrated book named as *An Essay on the Principles of Population*. The law of population propounded by Malthus in this book is known as the Malthusian Theory of Population. Malthus's reasoning can be conveniently divided into three parts<sup>1</sup>: the supply of labour, the demand for labour, and the conclusion.

(1) *The Supply of Labour*. Malthus argued that human beings have a natural instinct to multiply their numbers almost recklessly. He studied the history of the various countries of the world and found it was so. The increase in population would have, indeed, been enor-

<sup>1</sup> Marshall, *Economics of Industry*.



mous were it not prevented by diseases, wars and famines, etc., all of which were called by Malthus, Natural or Positive Checks to Population.

(2) *The Demand for Labour.* According to Malthus, the amount of food grown in a country is the limit set by Nature for the growth of population. It is, in other words, the maximum demand for labour. Population cannot manage to cross this limit for any length of time.

Malthus showed that up to the time of his writing, no country had been in a position to grow all the food for its increasing population. In other words, population tends to increase faster than the food supply. He illustrated this tendency by the use of geometrical and arithmetical progressions. He said that if population is *assumed* to increase in geometrical progression like 1 : 2 : 4 : 8 : 16 and so on, food supply will have to be *assumed* to increase only in arithmetical progression like 1 : 2 : 3 : 4, etc.<sup>2</sup> Thus population tends to outstrip the means of subsistence.

(3) *Conclusion.* This study led Malthus to conclude that history is likely to repeat itself. Population will always tend to outstrip the food resources and Nature will do her own pruning. Diseases, wars, famines and such other calamities (Positive Checks) will continue to carry off surplus population in future as they have done in the past.

The future of the society thus painted by Malthus was monstrously gloomy and dark; he was seriously criticized for it and began to be called a 'pessimistic economist'. He, thereupon, made further study of the problem and added preventive checks to the positive checks already mentioned by him. He opined that all the miseries to which Nature subjects humanity for carrying off the surplus population *i.e.*, the Positive Checks, can be escaped if human beings practise moral self-restraint, *i.e.*, preventive checks, and thus keep population well within the limit set by food resources of the country. He thus formulated two kinds of checks to prevent population : (1) *Preventive Checks*, like moral self-restraint, which human beings can apply to escape the rude methods of decreasing population which Nature adopts; and (2) *Positive Checks*, *i.e.*, the methods adopted by Nature for doing away with surplus population. Malthus appealed to Christians and non-Christians to exercise moral self-restraint and keep population in check to escape the misery and vice that may be the lot of future generations.

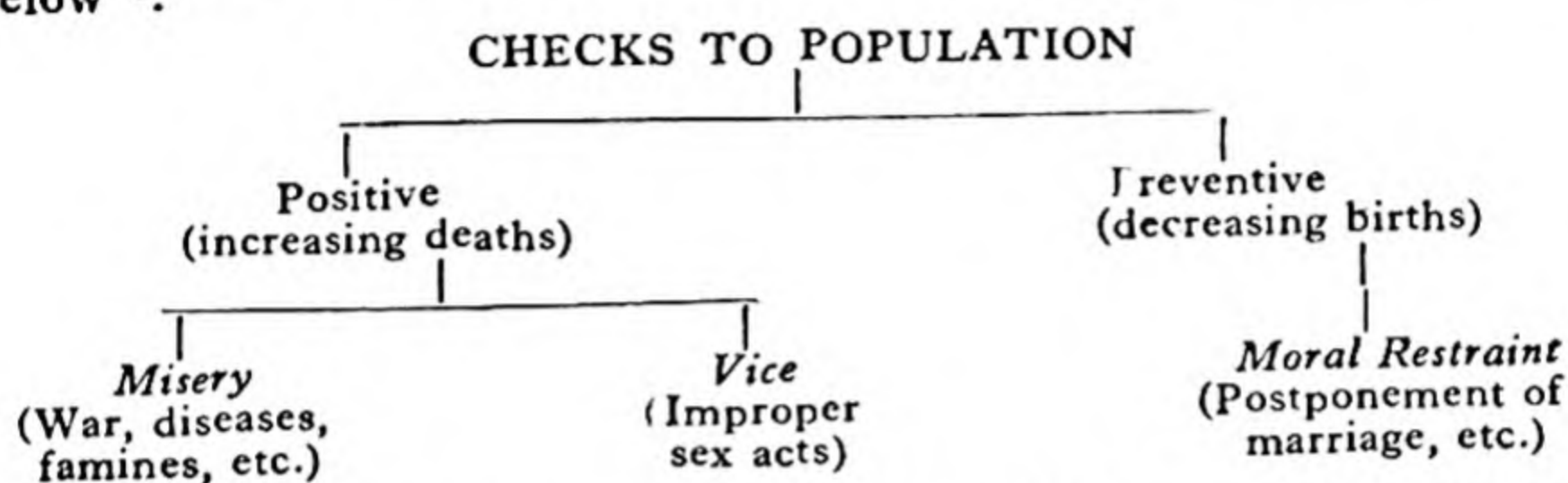
### Checks to Population

The checks to population propounded by Malthus may be studied in greater detail. According to him, the available food supply is

<sup>2</sup> Sometimes it is stated that according to Malthus food supply increases in arithmetical progression while population increases in geometrical progression. This is a wrong statement. Malthus never said this. He simply illustrated the increase in population and food supply by geometrical and arithmetical progressions respectively. This misstatement is a very common error and should be avoided by students.



the natural limit against which population is constantly pressing. The methods of preventing population from crossing this limit, were called by him "checks to population". From the objective point of view he divided these checks into positive and preventive. Positive checks include those causes which increase the death rate<sup>3</sup> and preventive checks refer to those causes which decrease the birth rate. From subjective point of view, these checks were classified into misery, vice and moral restraints. Vice is different from misery inasmuch as its immediate effect may be happiness while the effects of misery are always bad. Moral restraint does not lead to misery or vice but causes a certain kind of temporary unhappiness. These checks have been tabulated below <sup>4</sup>:



It is interesting to note that Malthus did not really believe in his heart of hearts, that preventive check, namely moral restraint, would ever be practised by a large majority of people and could be seriously depended upon to limit population. His wavering attitude paved the way for the so-called Neo-Malthusianism which sanctions the use of artificial methods of birth control as an effective preventive check to population. Mahatma Gandhi advocated the practice of moral self-restraint and did not favour the use of artificial means.

### Criticism of the Malthusian Theory

Malthusian theory is not entirely correct. It was certainly correct at the time when Malthus propounded it ; but since then the world has considerably changed, and many factors unforeseen by Malthus have come into play and have rendered his theory inapplicable to modern times. During the time when Malthus lived, the population of Great Britain was on an increase ; food supply was getting scanty. Great Britain could not draw food supplies from India or America due to absence of trans-oceanic trade. Time was ripe for a theory as gloomy as Malthus's. All these conditions have now become things of the past. Population of Great Britain has increased only insignificantly. Food supply is not deficient now mainly due to the development of oceanic trade and transport. England has today become a great manufacturing nation and though she does not produce enough food for her dense population, she can exchange her manufactured

3 It is impossible that a positive check so goading and remorseless as famine should prevail without bringing in her train all the others. Pestilence is her uniform companion, and murder and war are her followers —Senior.

4 See Gide and Rist, *History of Economic Doctrines*.



products with the agricultural products of other countries and sustains a much larger population than what Malthus could imagine.

*Malthus, in fact, exaggerated the rate of increase of population.* He did not realise the biological fact that the fecundity of human race diminishes with advance of civilisation. A general rise in the standard of living of the world population has decreased births. Even in the lower classes, the enactment of the various Educational and Factory Acts, prohibiting employment of children, has made the begetting of children unprofitable. Malthus did not foresee all these developments. He also failed to give weight to the various social tendencies which today operate against an increase in population. For instance, there is a strong feeling in modern society against large family which is regarded as a great folly and the old pride in large family has now vanished.

Malthus not only exaggerated the rate of increase of population, *but he also failed to foresee the rapid increase in the production of food-stuffs* which modern nations can command. He did not realise that the Law of Diminishing Returns could be checked by improvements in methods of agriculture. He also did not understand that food supply produced by a nation is not an effective limit to her population ; the limit is, in fact, set by the quantity of foodstuffs that a country can command, either by herself producing it or by importing it from other countries. A manufacturing country may grow very little food-stuffs but may export its manufactured goods and import food supplies instead, and may thus support a very heavy population. This is, for instance, what England is doing at present. In fact, the problem of modern society is not under-production but over-production ; our problem is not how to produce more goods, but how to dispose of the goods that have already been produced.

Recent statistics definitely prove that in advanced countries like U. S. A., United Kingdom, France, etc., population has not increased so rapidly as the means of subsistence.

*Malthusian Theory and India.* Though the Malthusian theory is not applicable to the western countries, it is applicable to a backward country like India. In India population has been increasing more rapidly than the agricultural output. Our manufacturing industries are also undeveloped or ill-developed and disable us from getting food supplies from other countries for manufactured goods. The consequence is that population often presses against the limit set by the food supplies. People of this country are so illiterate and so blindly wedded to loose religious and social customs that they do not practise moral self-restraint. The absence of preventive checks is associated with the absence of the practice of artificial methods of birth control because of the poverty, illiteracy and conservatism of the masses. Naturally, therefore, Nature brings into action her own rough and crude methods. Diseases, floods, earthquakes, riots, etc., take place very often and carry off the surplus population every now and then.

### § 3. OPTIMUM THEORY OF POPULATION

The Malthusian Theory tells us the maximum population that



can exist in a country, in relation to the available food supply. If population tends to outstrip the available food supply in a country, positive checks will exterminate the surplus population. Modern economists, however, do not look at the population problem from this point of view. According to them no country today wants to have the maximum population that it can possibly have ; on the contrary, every country wants to have ideal or optimum population. *Optimum Population is that population which yields the maximum income per head.*

### Theory of Optimum Population

If we assume that all the factors of production are constant but only population can be increased or decreased, we will find that there is a certain quantity of population which will make income per head maximum. If the quantity of population is less than this, the income per head will decline. On the other hand, if the quantity of population is more than this, even then the income per head will decrease. *That quantity of population which maximises income per head is called the Optimum Population.* Every country should try to have optimum population. This is called the theory of optimum population.

*Over-population and Under-population.* If the actual population of a country exceeds the optimum population, it is said to be *over-population* ; and the country is taken to be over-populated. As against this, if the actual population of a country is less than the optimum population, it is said to be *under-population* ; and the country is said to be underpopulated.

### Optimum Theory and Malthusian Theory

Modern economists think that the correct population policy for a country is that it should make sincere efforts to have that size of population which will yield maximum income per capita. That quantity of population which, in association with given resources of production, would give maximum income per head, is the optimum population of the country. In this way, the optimum theory of population gives us a clear and definite advice (in regard to population) in our effort to develop a country economically.

But the Malthusian Theory tells us as to what can be the maximum population in a country. In such a set-up, the standard of living of the people that is contemplated is presumably the subsistence level. In other words, the Malthusian Theory tells us the maximum size of population that a country can have if its object is to have only subsistence standard of living. In modern times when every country of the world is trying its best to maximise its income per capita with a view to relieve its people from widespread poverty and sufferings, such a viewpoint is out of date and unhelpful.

### INTERMEDIATE QUESTIONS

1. "The problem of population is not one of mere size in relation to food supply but of efficient production and equitable distribution." Discuss. (Andhra, Inter., 1949).



2. Write a critical and explanatory note on Optimum Population. (Bombay, I. A., 1940).
3. Explain the meaning of (a) Optimum Population, (b) Over-population, and (c) Under population. What, in your opinion, are the merits of the optimum theory as against the Malthusian theory of population? (Bombay, I. Com., 1944).
4. "Population tends to outgrow the means of subsistence." State and explain this theory and say how far it is applicable to India. (Bombay, I. Com., 1948).
5. "The problem of population as a whole is not of number alone but of efficient production and equitable distribution." Discuss. (Bombay, I. Com., 1939).
6. State and critically examine the Malthusian Theory of Population. (M. B., I. Com., 1953).
7. Write a note on Preventive and Positive Checks. (M. B., I. Com., 1952).
8. Discuss the Malthusian Theory of Population. Is it applicable to India? (Osmania, I. Com., 1952).
9. Distinguish between Positive and Preventive Checks to Population. (Poona, I. A., 1950).
10. Discuss the Malthusian Theory of Population. Is India over-populated? (Poona, I. A., 1949).
11. State and explain the theory of optimum population. How far does it improve upon the theory of Malthus? (Poona, I. Com., 1950).
12. Discuss the Malthusian Law of Population. What is meant by optimum population? (Poona, I. Com., 1949).
13. Write a note on Optimum Population. (Rajputana, I. A., 1951).
14. Explain the following : (a) Natural Increase of Population, (b) Positive and Preventive Checks to Population. (c) Optimum Population. (Raj., I. A., 1943).
15. Examine the economic consequence of increase in population of a country. (Raj., I. Com., 1945).
16. Explain what is meant by positive and preventive checks to population? In a country with overgrown population, which of the two checks would you prefer in order to bring down the population? Give reasons. (Raj., I. Com., 1946).
17. Population, if unchecked, tends to grow faster than food supply. Examine this with special reference to India. (Travancore, Inter., 1943).

## CHAPTER 29

### QUALITY OR EFFICIENCY OF LABOUR

The men whose heads and hands perform the labour in our industrial system are the chief factors of efficiency and success. The study of the workman in order to understand the various elements that affect his working power is an important and serious problem for every management.—*Norri. A. Brisco.*

Efficiency of labourers is one of the two factors on which the supply of labour of a country depends, the other being the size of population. The term efficiency of labour signifies the capacity of the labourer to do more work or better work or both during a given period of time. Efficiency of labour is a comparative concept. If a worker can work twice as much as the other, or if his work is twice as good as that of the other, he is two times as efficient as the other worker. It is a fact of common observation that labourers working in the same occupation under similar kinds of tools and raw materials and for the similar period of time turn out different quantities of work or work of different qualities. Why is it so? Why should there be such diversities in the productivity of the efficiency or workers? What are the factors upon which the efficiency of labour depends? These are the questions to which we shall now address ourselves.<sup>1</sup>

#### Factors Determining Efficiency of Labour

Efficiency of labour depends upon a large number of factors. It depends partly on the employer and partly on the employed, partly on the organisation and partly on individual effort, partly on the tools and machinery, etc., with which the worker is supplied and partly on his own skill and industry in making use of them.<sup>2</sup> Broadly speaking these factors are divisible into two classes :

- (i) Factors affecting the ability and willingness of labourers to work, and
- (ii) Factors affecting the capacity of the organiser to organise labour.

The first set of factors is of greater importance than the second.

#### (i) Ability and Willingness of the Workers

Efficiency of labour mainly depends upon the capacity of the labourers to exert themselves; and upon their willingness to work. Capacity to work unaccompanied with the willingness to labour, or mere willingness to work unattended with capacity, cannot make a

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<sup>1</sup> Social reformers attach much importance to efficiency of individuals. Dr. Samuel Smiles says, "The highest patriotism and philanthropy consist, not so much in altering laws and modifying institutions, as in helping and stimulating men to elevate and improve themselves by their own force and independent individual action."—Smiles, *Self-Help*, Vol., p. 3.

<sup>2</sup> Penson, *The Economics of Everyday Life*, Vol. 1, p. 51.



man efficient. Below are discussed the various factors which determine the ability and willingness of labourers to work :

(1) *Racial and Hereditary Characteristics.* The qualities of one's race and parents determine one's efficiency to a great extent. Intelligence, physical strength, capacity to sustain prolonged exertion and such other qualities pass on from one generation to the other imperceptibly. The sailors of Great Britain and Norway, the watch-makers of Switzerland, the artists of Italy, the cutlers of Sheffield and the sword-makers of Toledo are noted for skill in their respective spheres even today. The caste system which is prevalent among the Hindus in our country was originally introduced with a view to preserve racial and hereditary characteristics. Though this system has now lost much of its hold, particularly in the economic field, still some of its influence continues to exist even today. A *Brahman* has an instinctive aptitude to the acquisition of knowledge, a *Kshatriya* is by his very nature drawn towards the military life, while a *Vaish* is naturally attracted to trade and commerce. Similarly the labourers of Oudh are better than the labourers of Bengal, while the former are excelled by the labourers of the Punjab.

(2) *Climate and Physical Conditions.* Climate has a determining influence on the efficiency of labour. Extremes of climate do not favour sustained hard work. Labourers tend to become most efficient in a temperate climate. In very cold climates, people may find it difficult even to come out of their houses, while in very hot climate the high temperature weakens the human frame. In our country, for instance, the climate of the Punjab and Western U. P. is good and the labourers of these states are, therefore, sturdy and strong. But the climate of Bengal is bad; and it is worse still in the Tarai regions where it becomes malarious. The labourers of these regions are often weak and inefficient.

Climate affects efficiency not only through its influence on the capacity and willingness of labourers to work but also through its reaction on the necessity to work. In tropical climates nature is generous in her gifts and little exertion is required for the satisfaction of human wants. Conditions tend to become harder in temperate climate under which much labour has to be undergone before one's wants can be satisfied. In cold climate extremely hard work is necessary. The consequence is that labourers of hot countries are often dull; of temperate regions, active; and of colder climates, very hardworking. Climate also determines the necessities and other requirements of life and in this way also determines efficiency.

So far as India is concerned its climate is subtropical, hence Indian labourers are not very efficient. Hard work for a long period is difficult in the scorching heat of the summer. Moreover, natural resources are abundant and the need for hard work is not pressing. Finally, necessities of life are few, and can be satisfied by little labour with the result that people are used to little exertion.

(3) *General Intelligence.* Efficiency of labour also depends on the general intelligence of the labourer. Intelligence is inherited as



well as acquired. Inherited intelligence depends upon the race and parents. Thus we see that an average American is clearer in his thought, quicker in his action and more exact in his judgment than an average Indian, while the latter is superior in these respects to an average Negro of Africa. The world as a whole is, however, rising in the scale of civilization and mental attainments and general intelligence are tending to become the possession of all. Intelligence is also acquired and depends upon the education in schools and the influence of the mother and home.

✓(4) *Education.* Education is a very important factor in the determination of efficiency, since it develops and awakens the latent capacities in man, and makes him otherwise fit as an active agent of production. Education may be general or practical. General education aims at widening the horizon of man's knowledge about general things. Such education gives the labourer a wider point of view and enlarges his conception of man and matter. It imparts to him social, economic and political enlightenment and strengthens his regard for morality. Such are the benefits of education that in almost all the civilized countries in the world primary education has been made free and compulsory; while in France education is entirely free from top to bottom. Unfortunately India has not yet introduced free and compulsory primary education. General education is acquired, not only in schools, but also by the reading of books, magazines and newspapers and by keen observation. Such facilities are not accessible to Indian labourers.

Technical education aims at befitting a labourer for a particular trade or occupation. It may be theoretical, or practical, or both, its exact character being determined by the nature of the trade, the taste of the labourer, and the position for which he is preparing. Since it aims at developing certain qualities required in a particular industry, technical education makes man a specialist. An important cause of the poverty and distress is that so many have not learned a trade. In India technical training is conspicuous by its absence. Technical institutes and vocational schools are very few, while factory and mill-owners do not take apprentices as a general rule.

✓(5) *Standard of Living.* The efficiency of a labourer is also determined by the standard of living of his parents who bring him up from his birth. For a man's physical fitness is largely the result of this standard. A labourer who is brought up in an atmosphere of all-round poverty, insufficient diet and insufficient clothing cannot be capable of great physical strain. The standard of living of the labourer himself has a similar influence on his efficiency. Healthy and nutritive food, adequate clothing and tidy and airy shelter associated with healthy recreation pave the way for efficiency. An adequate supply of all these factors to the masses of India is the greatest national problem, upon the solution of which depends the welfare of the country.

(6) *Moral Qualities.* Honesty, sincerity, industry, and such other moral qualities determine the efficiency of a labourer. All these qualities are summed up in the word "character". Character-



building is a great national duty and is the outcome of early educational, religious and social atmosphere in which a man is brought up. If the influence and the atmosphere are wholesome, the sense of self-reliance, self-control, self-discipline, diligence, purposefulness and such other qualities get a strong root and make a man thoroughly efficient; but if the influences are unwholesome, a man loses all these qualities and practically ruins himself.

✓ (7) *Freedom, Hope and Change.* Freedom, hope and change increase the efficiency of labourers. A slave, who lacks freedom, also lacks efficiency. Again, workers who have no hopeful prospects, even if they show good results, hardly have any incentive to be efficient. Finally, where the work is very monotonous and the worker is tied down to the same task day in and day out, he ceases to take any interest in the work; but if a system of pleasant change in the type of work that he does is introduced, he gains efficiency through the process of automatic recreation and recuperation of lost energy.

(8) *Adequacy, Nearness and Directness of Reward.* If a labourer gets sufficient reward, he is likely to work sincerely and become efficient. If the reward is insufficient and the labourer is dissatisfied with it, it will make him psychologically inefficient. Besides, it will keep his standard of living low and will not furnish him with the conditions which contribute to efficiency. The reward should not only be sufficient, but should also be nearer and direct. Labourers are, as a general rule, short-sighted, and do not take more than one year in their calculations so that if a reward is promised to them, it must be made available within one year; otherwise it will hardly have any effect on them. Finally, the reward must be given to them in some direct form. If it is given in an indirect or hidden form, like the improvement of working conditions, or the sale of better quality of goods at cheap price, they may not realize the advantages of the measure and its object may be defeated.

✓ (9) *Working Conditions.* Efficiency is also affected by general working conditions. It has been found by experiments that improved lighting, ventilation, and sanitation of factories contribute to the muscular and mental strength of the labourers and as a consequence increase their output. In our country, much attention is not paid to the conditions of work. In *karkhanas* and small factories labourers have to work in unhygienic, congested and badly ventilated rooms and *kothris*, where their physical and mental vitality deteriorates through a process of slow emaciation.

• (10) *The Number and Distribution of Working Hours.* It is sometimes supposed that if the number of hours for which labourers work is increased, their output will correspondingly increase. But experiments in various countries of the world have shown the short-sightedness and mistake of such belief. In fact, reduction of hours up to a certain point actually increases rather than decreases the efficiency of labourers. If labourers work for a smaller number of hours, they get ample time for the recovery of their lost energy; so that when they go to work the next day, they are full of vigour and strength men-



tally as well as physically. They are thus able to produce more and in fewer hours than before.

Not only the number, but the distribution of working hours is also important for the efficiency of the labourers. If the rest periods are wisely introduced and good use is made of that period, labourers will feel gay, happy and refreshed.

(11) *Social and Political Conditions.* Efficiency of labour is increased if social and political institutions, customs and laws are of labour. In India, for instance, it is the caste which determines the occupation of a person at the time of his birth. Such a determination pays no attention to the aptitude of the person concerned which is indeed the most important factor to be taken into account. Similarly, a long subjection to foreign rule had developed an inferiority complex in the masses of India, which made them feel that Englishmen are always more efficient than themselves. However, as a result of the freedom of the country this tendency has disappeared. Labour Legislation and Factory Laws have begun to insist on the provision of good ventilation and cleanliness in factories, sufficient wages and short hours of work. Such steps tend to increase efficiency of labourers.

## (ii) Capacity of the Organiser

Efficiency of labourers depends not only upon the ability and willingness of labourers but also upon the way in which the labour force is organised. If each labourer is given the task for which he is best fitted, if he is supplied with good appliances, and if he is properly trained for his job, his efficiency is bound to be great. These are the matters which are taken care of by the organiser. He is also to co-ordinate, in a proper fashion, the work of a particular group of labourers with that of all the other groups. 'The work done by the group is not merely the sum total of what the men could do as individuals. It is infinitely greater, and how much greater is a matter of organisation.

## INTERMEDIATE QUESTIONS

1. Examine the several factors which affect the efficiency of labour. (Karachi, I. Com., 1952).
2. Discuss the factors which affect the efficiency of labour. (M. B., I. A., 1953).
3. Explain the various methods of increasing the efficiency of workers in a cotton factory. (M. B., I. A., 1952).
4. Explain the factors that affect the efficiency of labour. (M. B., I. Com., 1952).
5. Show that the prosperity of a nation depends on the efficiency of its people. On what conditions does the efficiency of Labour chiefly depend? (Osmania, I. A., 1952).
6. Examine the factors on which the efficiency of labour depends. (Poona, I. A., 1950).
7. Analyse carefully the conditions upon which the efficiency of labour depends. (Raj., I. A., 1953).
8. What do you mean by efficiency of labour? Explain the factors affecting it. (Raj., I. A., 1942).
9. What are the factors that determine the efficiency of labour? Is it affected also by an increase in population? (Raj., I. Com., 1952).
10. On what factors does the efficiency of labour depend? To what extent are they present in India? (Travancore, Inter., 1943).
11. What are the causes of efficiency of labour? (Utkal, I. Com., 1951).



## CAPITAL : MACHINERY

Had legislators been aware that industry is limited by capital, they would have seen that the aggregate capital of the country not having been increased, any portion of it which they by their laws had caused to be embarked in the newly acquired branch of industry must have been withdrawn or withheld from some other in which it gave, or would have given employment to probably about the same quantity of labour which it employs in its new occupation.—*J. S. Mill.*

## § 1. MEANING OF CAPITAL

The minimum and indispensable requirements of production are land and labour ; but land and labour alone cannot produce a commodity on a large scale. Artificial things are necessary to aid man's attempts if production of wealth is to assume large proportions. This fact was realised even by primitive people who invented some simple tools and implements to help them in different ways. Considerable progress has been made since then and today human beings use very intricate and gigantic, machinery, mammoth factories, and a widespread network of transport system. All such artificial aids to production may provisionally be called capital.

Such articles have two characteristics in common : (1) they are articles of wealth ; and (2) they are used for further production of wealth. *Capital may, therefore, be defined as that part of wealth, other than land<sup>1</sup>, which is used for further production of wealth.* Obviously, all capital is wealth, but all wealth is not capital—that part of wealth which is not used for further production of wealth is not capital.

Whether an article of wealth is capital or not depends, not on any inherent quality in that article, but on the use to which it is put by its owner. Suppose a man possesses a sum of Rs. 10,000. If he hoards it in an iron chest, this sum cannot be called capital ; but if he invests it on a factory instead, it will certainly be called capital. *J. S. Mill* aptly observes, "The distinction between capital and non-capital does not lie in the kind of commodities, but in the mind of the capitalist, in his will to employ them for one purpose rather than another".<sup>2</sup>

We can look upon capital from another point of view as well. The income of a person, as has already been remarked, may either be spent for the satisfaction of the present wants or be put aside for satisfaction of future wants. The latter operation may take the shape of hoarding, or of saving which implies the use of income in a

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1 Land should be excluded from the concept of capital because land is also wealth and is likewise used in further production of wealth. Hence capital should be defined either in the above way or as that part of wealth which is made by man and which is used in further production of wealth.

2 *J S. Mill Principles of Political Economy.*



productive way. The part of income which is thus employed productively is known as saving.<sup>3</sup> Saving is simply the conversion of wealth into capital by applying it to productive purpose.

### Money and Capital

Some people imagine that money and capital are words with the same meaning. This, however, is not so. All money is not capital; only that money which is used for further production of wealth is capital. The money spent on the purchase of food, clothes and other things of ordinary consumption, or buried underground, is not capital. Again all capital is not necessarily in the form of money. Big buildings, machinery, raw materials, etc., are all capital, but none of them is money.<sup>4</sup>

It must, therefore, be clearly remembered that capital has no special relation with money; and nothing, be it money or not, can be called capital unless it helps in the further production of wealth.

### § 2. CHARACTERISTICS OF CAPITAL

The chief characteristics of capital are stated below :

(1) Capital is a dispensable factor of production inasmuch as wealth can be produced even without it. But for large scale production, capital is absolutely essential.

(2) Capital wears out through wear and tear or passage of time and has to be replaced. An American machinery, for instance, lasts for about ten years. It may, therefore, be assumed that 10 per cent of that machinery wears out each year. In the books of accounts, therefore, the value of machinery is reduced by 10 per cent, each year, so that by the time the machinery becomes useless, its value also drops down to zero. Such shrinkage in value is known as *depreciation*.<sup>5</sup>

(3) Capital is the result of saving which involves waiting. As such, borrower of capital has to give a remuneration to its lender, which is called interest.

### Land and Capital

Land can be distinguished from capital in the following respects:

(1) Capital is the result of human effort, but land is not made by any human being—it is the gift of Nature.

(2) Capital depreciates and has to be replaced, but land (its area and site) does not wear out.

(3) Capital is produced only so much as to meet the existing

3 But it should be remembered that capital includes not only the income used productively but also the wealth put for similar use.

4 Modern economists have begun to distinguish between (i) *money* which is used productively ; and (ii) *articles*, like factories and machinery, which are used productively. The former is called by them *capital* ; and the latter, *capital goods*. For instance, if A invests Rs. 10,000 in the construction of a factory, the factory is his capital good, while Rs. 10,000 are his capital. The distinction is helpful in advanced theorisation.

5 When we charge 10 per cent. depreciation each year, we do not mean



or anticipated demand; its production, in other words, is regulated according to demand. But land continues to exist whatever the demand be. Capital, in other words, can be increased and decreased but land is fixed in quantity.

### Is Land Capital ?

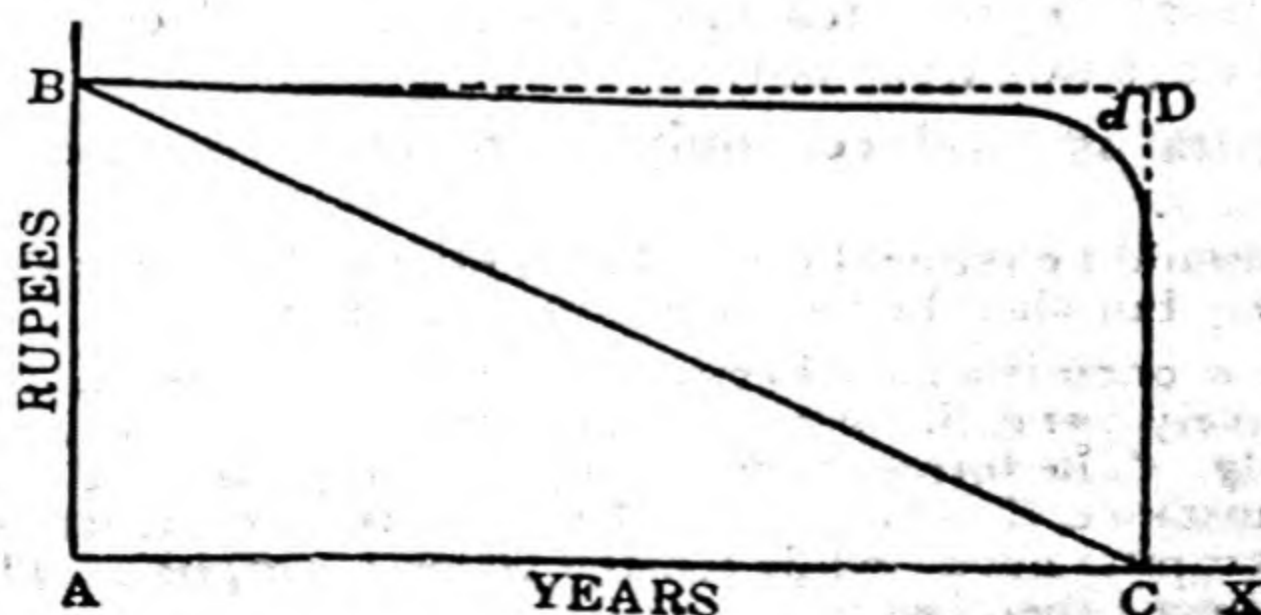
It is the feeling of some thinkers that land should be regarded as capital. When a man, they say, purchases a piece of land, he has to pay a price for it; he does not get it free. It is not a free gift of Nature to him. The purchase of land cannot be distinguished from the purchase of, say, machinery. As such, land may be safely included in capital.

Land is not a free gift of Nature to the purchasers; but it is a free gift of Nature to the society at large. Machinery costs something to the society, as it does to individuals; but land does not cost anything to the society, though it does cost to the individual. There is, as such an important difference between the two. This and other points of difference between land and capital show that land cannot be regarded as capital. One is quite distinct from the other.

### § 3. IMPORTANCE AND FUNCTIONS OF CAPITAL

The importance of capital has been emphasised in a previous chapter. Land and labour alone and unassisted cannot carry on production on any considerable scale. Without capital the energies of man can be only imperfectly employed and the gifts of nature only partially exploited. Capital 'enables man to utilize completely nature's materials and forces by the substitution of roundabout methods of production for direct ones; and it accomplishes this result by furnishing the tools for such roundabout methods, and by making possible a longer interval between the initial effort and the final effort, or consumption'. Even in the primitive life some sort of capital was made use of in the production of wealth. In the earliest stage of human development, people had invented stone weapons, bows and arrows, rough net and sharp stick. With the spread of knowledge and civilisation, impor-

that an exact  $\frac{1}{10}$ th of the machinery has worn out. The actual shrinkage in



value may take the shape of BdC curve, whereas the depreciation charge may be a straight line, BC.



tance of capital has also been increasing, so much so that the present age is called the 'Age of Capitalism'. Even if Capitalism is superseded by some other system of social organisation like Socialism or Communism, the importance of capital is bound to remain supreme. No man has been so eloquent of the attainments and possibilities of the use of capital as Marx, the Father of Socialism ; and Russia, the communist country, has been making its use on a large scale.

### **Functions of Capital**

Specifically, the chief function performed by capital is to enable the producer to start production and to wait for the result which appears only after some time. During the intervening period capital provides means of subsistence to the labourers, and producers instruments of production and raw materials.

(1) *Provision of Livelihood.* In modern times goods are produced in anticipation of demand. A long time usually intervenes between the commencement of production and the final disposal of goods. During this period, it is capital which provides the where-withal for the feeding and clothing and satisfying other requirements of producing agents.

(2) *Provision of Appliances.* Capital also provides factory buildings, machinery and other instruments of production. Modern methods of the production of wealth are highly mechanised and comprehensive and require a mint of money.

(3) *Provision of Raw Materials.* Capital enables producers to purchase raw materials which are later on converted into finished products. Material includes not only such raw materials as are obtained from Nature but also partly manufactured articles.

### **§ 4. TYPES OF CAPITAL**

Capital assumes numerous forms and may be classified according to several standpoints. The following are some of the more important classifications of capital.

#### **1. Fixed and Circulating Capital**

Capital may be fixed or circulating. Fixed capital is of a permanent and durable nature, and is used in production over and over again. Buildings, machinery and implements are some of the examples. Fixed capital may, then, be defined as the capital which exists in a durable shape and which is used in production repeatedly for the performance of the same function. Circulating capital is capable of rendering service to production only once. For instance, tallow and alkali which are used in the manufacture of soap, can be thus utilized only once; they cease to be tallow and alkali after their first use and cannot serve that purpose again. Circulating capital may then be defined as the capital which is consumed in its first use in production and cannot be used more than once for the performance of the same function.

#### **2. Production (or Trade) and Consumption Capital**

Capital which is used in the production of certain articles is known



as production capital. Raw materials, machinery and buildings are some of the examples of production capital. It is to be distinguished from the capital which satisfies human wants directly and is known as consumption capital. It includes the goods which give a direct subsistence to the workers as food, clothes and light.

### 3. Sunk and Floating Capital

Capital which is specially designed and specialised for a particular purpose, so that it ceases to remain fit for any other purpose, is called sunk capital. Capital invested in making a bridge or in manufacturing a railway engine is sunk capital. But the capital which is not so specialized in its application and can be transferred from one productive use to another is known as floating capital. Cash and raw materials are the examples of floating or unspecialised capital.

### 4. Material and Personal Capital

When capital is embodied in a tangible material object and can, as such, be purchased and sold, it is known as material capital. The qualities of an individual, all those energies, faculties and habits which contribute to make a person efficient and cannot be transferred to any other person, are known as personal capital.

### 5. Remuneratory and Auxiliary Capital

The capital used in the payment of wages to labourers is known as remuneratory capital; while that which helps labour in production, like tools and machinery, is called auxiliary capital.

## § 5. EFFICIENCY OF CAPITAL

Efficiency of capital depends upon (1) its fitness for the productive purpose to which it is put, and (2) the methods of its application.

### 1. Fitness

By fitness is meant the suitability of capital to the productive purpose to which it is devoted. This suitability depends upon the characteristics of capital and the nature of its employment. When both these factors are agreeable to the purpose in view, efficiency is achieved. An illustration will make the point clear. Suppose a very big building, sufficient to accommodate gigantic machines and thousands of labourers, is converted into a big factory, it will be quite efficient for that purpose. But if the same building is used as the workshop of a small artisan, it will be too costly and spacious to be called efficient.

### 2. Methods of Application

The method in which capital is used also determines its efficiency. If a machine is handed over for operation to an unskilled labourer, he will not be able to make its best use; under his charge the machine is bound to remain inefficient. Good materials and good tools are certainly great aids to efficient production, but they can achieve efficiency only if they are used by skilled labour working under good management.

## § 6. ACCUMULATION OF CAPITAL

We shall now consider the factors which govern the accumulation of capital. As J. S. Mill observes, "Since all capital is the



product of saving, that is of abstinence from present consumption for the sake of a future good the increase of capital must depend upon two things—the amount of fund from which saving can be made and the strength of its dispositions which prompt to it”.\* In other words, the accumulating of capital depends upon (1) the ability to save and (2) the willingness to save. The following chart is illuminating in this respect :

(A) Ability to Save	(B) Will to Save	
	Subjective Conditions or Personal Motives	Objective Condition or Conditions Prevailing within the Country
Excess of income over expenditure.	1. Prudential considerations. 2. Social and political considerations. 3. Economic considerations. 4. Temperamental considerations.	1. Security. 2. Field and facilities for investment. 3. Capable businessmen. 4. Existence of the means of storing value.

Chart 31—Explaining the accumulation of capital.

### Ability to Save

Saving is possible only if one's income is greater than one's expenditure. If a man spends Rs. 200 per month and his income is exactly equal to that amount, or less than that, he cannot afford to save anything. But if the income of the same man rises to say Rs. 250, he can save Rs. 50. It is the surplus of production over consumption, then, which gives rise to capital. Such surplus may accrue either from increased production or from more economical consumption.

*The Case of India.* The ability of our countrymen to save is negligible. This is due to the fact that the income of the majority of the people is very small. The income per head in India comes to Rs. 255 a year, which is barely sufficient for maintaining a person even at the subsistence level. Under the circumstances capital accumulation cannot be expected to assume any considerable scale. It is only a few rich people of the country, whose income far exceeds their expenditure, who are the accumulators of large amounts of capital such as it exists in this country.

### Willingness to Save

The excess of income over expenditure does not of itself lead to the creation of capital. There must also be a willingness on the part of person concerned to save money, that is, to put it to productive purpose. The willingness to put the surplus money to such purpose is influenced by two sets of causes : (1) subjective considerations,

\*J. S. Mill, *Principles of Political Economy*, p. 101.



*i.e.*, personal factors : and (2) objective considerations, *i.e.*, personal conditions prevailing within the country. We shall discuss them below.

### 1. Subjective Considerations or Personal Factors

The important personal factors which prompt men to save money are the following :

(1) *Prudential Considerations or Foresight.* Men sometimes save money as a provision against some contingency when their income might stop or diminish due to some reason or the other. Factory workers, for instance, try to save some money which might support them during the period of unemployment or illness. In old age, too, one's earning capacity seriously deteriorates or comes to an end ; and money is saved to be of help in such a time. People also try to save money with a view to leave something to their dependants after their death. These prudential considerations which lead men to save money, either for the "rainy day" or for their dependants, constitute what is generally called *foresight*.

(2) *Social and Political Considerations.* In the modern age of capitalism, it is wealth or capital which brings prestige, respect and power in social sphere and political life. The desire to command esteem and wield influence is an important cause of the accumulation of capital. The greater the esteem in which capital is held and the higher the social and political power which it is capable of giving, the greater will be the strength of this motive.

(3) *Economic Considerations.* There are certain important economic considerations which also lead to an accumulation of capital. The first of these is the desire to earn interest. The higher the rate of interest, the greater is the inducement to save money. The second motive is the ambition to succeed in business. A businessman commanding large capital finds the gates of success open for him ; while a businessman with small capital is seriously handicapped in several ways. Capital is as such also accumulated with a view to excel one's business competitors.

(4) *Temperamental Considerations.* There are some people with whom saving is a habit and is as assertive as any other habit. Just as they cannot live without eating and drinking, similarly they cannot probably live without saving.

*The Case of India.* In India, subjective forces do not generally operate very powerfully ; they move only the richer sections of the population. The rich and the middle-class people have the desire to leave something for their dependants but the poor fail to take distant future into account, though the sense of family affection is quite strong with all classes of people. The possession of capital certainly gives social and political prestige in this country, but people are generally illiterate and poor and this ambition does not become effective in the case of majority of them. High rates of interest are probably found attractive by them and some of them are proverbially habituated to save money. But so far as the majority is concerned, it rarely gets the occasion for exercising its willingness to save due to extreme poverty.



## 2. Objective Considerations or Conditions within the Country

A man possessing the ability to save will like to save only if the conditions prevailing within the country are favourable. The important conditions are the following :

(1) *Security.* A man will like to save money only if he is certain that his savings can be kept safely. If he fears that his savings might be taken away by robbers, or be snatched away by unjust tax-collectors of the Government, or be destroyed in warfare, or be devastated by such natural calamities as earthquakes and volcanic eruptions, his incentive to save will be damped. In early times, life and property of the people were not safe ; and the people were consequently thriftless. But the spread of civilisation and the establishment of organised society guaranteed them adequate protection, and capital accumulation on a large scale is an accomplished fact now. In India the break-up of the Moghal Empire saw frequent wars, daring robberies and excessive taxation which fleeced capitalists of their capital as sheep is fleeced of its wool. Such insecurity made people spendthrift and reckless, and capital accumulation was meagre.

(2) *Fields and Facilities for Investment.* People can put their money to productive purposes only when fields and facilities for investment are available. In their absence the money which is saved will be hoarded and will not become capital. In the modern age, however, such fields and facilities have greatly increased in number and efficiency. Agriculture, industries, transport, hydro-electric works and other spheres of production have become highly capitalized and are in chronic need of capital. Facilities for investment have also multiplied on all sides. Everywhere we find banks, shares and bonds of companies, insurance policies, Government securities, all of which have greatly increased in popularity and have stimulated the accumulation of capital.

In India, however, fields of investment are not so large as in America or the United Kingdom, but the scope is definitely increasing with great rapidity. Large-scale production in factories and farms, large iron and steel and hydro-electric works, big insurance and banking companies, are coming into being ; and capital is finding diverse and satisfactory channels of application. So far as investment facilities go, they are not very satisfactory at present and lack both in numerical strength as well as in efficiency. Joint stock banks are not very many, while savings banks and co-operative societies are also few.

(3) *Capable Businessmen.* People are induced to invest money only in the concerns conducted and directed by trustworthy and capable businessmen. The business magnates well known for business efficiency and honesty always inspire confidence in the public and large funds are easily entrusted to them without any hesitation. Such persons are very few in our country. Tatas and Birlas can be counted on the tips of one's fingers. This is an important reason why capital is not very large in this country. Whenever any capable businessman starts business, there is no dearth of capital for him.



(4) *Existence of Money as a Store of Value.* People will save money only if they find that there exists a means of storing value for long periods without any loss. In India we have the rupee as our legal tender which is a good store of value.

*The Case of India.* The willingness of the people of this country to accumulate capital was not very powerful in times gone by because of the political and economic instability, insecurity and such other unfavourable factors. Since those times, however, conditions have been changing slowly and gradually. Since the Great War I in particular, there has been a tremendous increase in the indigenous capital. But still the following remarks, made by Mr. Dudeney are not very wide of the mark :

" Indeed, it is equally the strength and the weakness of the Indian native mercantile community that its members possess great wealth yet fail to use it fully. Even the most wealthy among them are invariably subject to the inherited and ineradicable oriental habit, bred of cruel necessity of hiding their money in such highly portable, convenient and easily hidden investments as jewellery and precious stones. If ever an Indian Pierpoint or Morgan arises he will not buy old masters, but will put his heart and his money into the collection of priceless diamonds, pearls and rubies. That is what every native capitalist does in his degree, and therefore, it should not be assumed that his credit is to be gauged only by the paper securities he can lodge with the banks."<sup>6</sup>

## § 7. MACHINERY

Machinery represents the important form of capital. Machinery has contributed to a great extent to the modern civilization inasmuch as it has enabled man to subdue Nature. Machinery has created a revolution in the sphere of production and has increased productive capacity tremendously. The modern machinery is a very complex and gigantic instrument of production and has been gradually evolved out of the very simple tools first designed by the primitive man. Agriculture, manufacture, transport and other businesses have become highly mechanised. Such an important role does the machinery play in the modern economic and industrial organisation and so fundamental and far-reaching are its repercussions on social life that the present age is often described as the *Age of Machinery*.

### Advantages of Machinery

The introduction and use of machinery on a large scale have brought about fundamental changes in our economic system. The chief advantages of machinery are discussed below :

(1) Machinery increases the power of man over Nature. There are several tasks which man cannot possibly perform or can perform only inefficiently ; but they can be done very easily and efficiently by big machinery like steam-hammers, cranes and floating docks. Machinery has enabled man to compel Nature to release her forces for the benefit of mankind.

(2) In the absence of machinery, 'continually repeated motions, involved in certain jobs, strain human muscles, and often cause monotony or even premature death. Such arduous work is now done by

<sup>6</sup> Frank M. Dudeney, *The Exporter's Handbook*, p. 23.

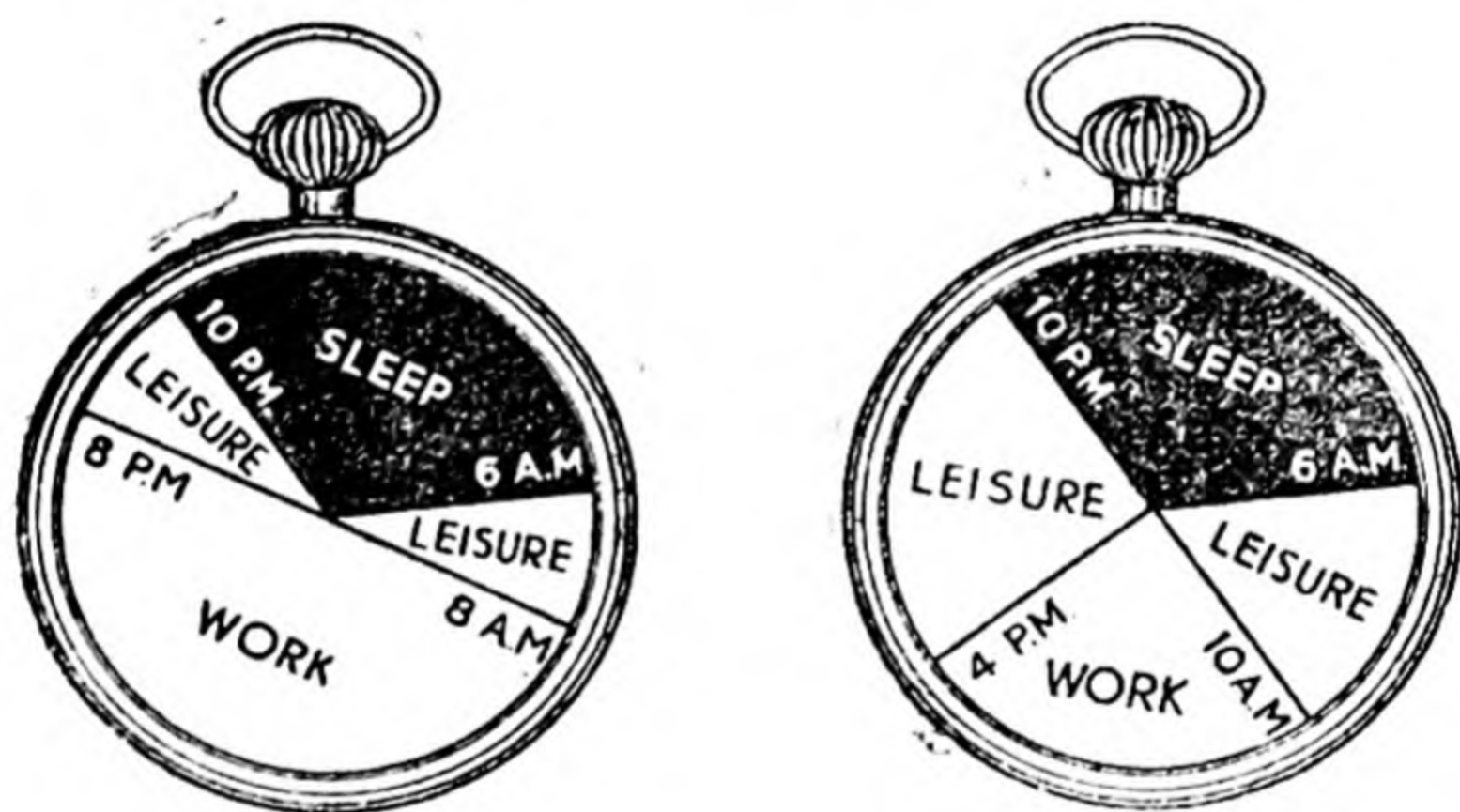


machinery which have thus spared human beings from terrible results. The common examples of monotonous work are the folding of newspapers and the feeding of papers in a printing press, both of which are now done by machinery with speed and precision.

(3) Machinery can unleash super-human energy and thus increase the quantity of output tremendously. They also improve the quality of output in certain respects. They have made output uniform and have introduced an era of mass production. Mere hands can rarely make two things similar ; but machinery can forge them exactly alike. The standardization of output has brought in several advantages, the most important of which is the possibility of the inter-changeability of the parts of machinery.

(4) Machinery makes large-scale production possible and ensures the availability of consequential internal and external economies. Output is thus increased at reduced cost per unit.

(5) Machinery saves time and gives rise to greater leisure. This leisure may be used for reading, recreation, spiritual development and useful activities. The following diagram shows this fact clearly.



Before the introduction of machinery. After the introduction of machinery  
Fig. 32. Showing how machinery saves time.

(6) Machinery has enabled unskilled labourers to do the tasks which could formerly be done only by skilled labourers. Disgusting and disagreeable work, like that of a sweeper, is also taken over by machinery. Very delicate and fine work, which human eyes and hands can do only with great difficulty and with rare success, is performed by machinery with great ease. There are machines which can even measure the diameter of a hair.

(7) Machinery increases the intelligence, resourcefulness and responsibility of workers. They give to labourers command over their eyes and hands. Labourers also increase their knowledge when they learn the working and mechanism of machinery.

(8) Machinery have increased the mobility of labour from



one occupation to another. As the mechanisation spreads, the ability of labourers to move also increases proportionately.

### Disadvantages of Machinery

Though machinery have so many advantages, their effects have not been altogether beneficial. They have been responsible for the economic, physical and moral degradation of workers. Such disastrous results have often led to rebellions among workers during the course of which they have typified machinery as their enemy and smashed them into pieces. But it is now growingly realised that in the long run these disadvantages are more than amply compensated. The chief shortcomings and disadvantages of machinery are mentioned below :

(1) The greatest argument given against the introduction of machinery is that they displace labour. Machine is a 'labour-saving device' in the sense that it can do the work of a large number of men who are thrown out of employment when machinery is introduced.

This of course happens in the earlier stages of the introduction of machinery. But later on the displaced labourers get employment on better wages and under improved conditions than before. This happens because the demand for labour increases later due to the following factors : (a) Machinery reduces the price of goods. Reduction in price increases the demand for them. The need of producing more goods gives employment to labourers. (b) To produce more goods, more machines are required, to manufacture which more labourers are employed. (c) More raw materials are also needed for turning out increased quantity of goods and labourers are employed to produce more raw material. The demand for labour thus increases after some time and the displaced labour finds employment on good terms. (This reasoning is, however, true only if the machinery is manufactured in the same country in which it is used. If, on the other hand, machinery is made in one country while it is used in another, the labour of the latter may be thrown out of employment and may not be re-employed).

(2) Machinery make skilled workers semi-skilled machine operatives. For instance, before the introduction of machinery in India, Indian weavers were famous for their art. We hear of the fine Dacca muslin, 20 yards by one yard, which could be made to pass through a finger-ring and required six months for manufacture. Such artists are not to be seen now. They have all disappeared because there is no market for their products now. Their articles are better in quality than the factory articles but the latter are very cheap while the prices of the former are almost prohibitive. High class hand-made articles do not sell now and skilled artisans have been compelled to work in factories as semi-skilled labourers.

(3) Machine-made articles are not as beautiful and artistic as some hand-made goods. The most artistic articles are still produced by hand. For instance, high-class and beautiful silk *saris* are usually woven on hand-loom. Machinery, by their very nature, cannot devote



that individual care and attention to minute details without which high-class artistic work cannot be produced.

(4) Machinery have been the cause of much physical and moral deterioration. Introduction of machinery has led to congested and over-crowded towns where labourers have to live in dirty quarters and to spend their lives in reeking festers of the slums. In such habitations, drinking habit, excessive sex indulgence, gambling and other social evils find free play and unfettered nourishment. As consequences of mechanisation have followed the 'sweating' of labour, over-exertion of the adult and undue strain on women and children. The moral independence, sense of security and self-reliance of labourers are now things of the past. The poor machine-tender can be 'fired' at a moment's notice and he has to starve during the period of unemployment.

(5) Machinery have led to large-scale production which, in turn often leads to over-production, *i.e.*, production in excess of demand. Over-production leads to a 'glut' in the market, shrinking prices and economic depression.

This allegation is, however, incorrect. Careful examination shows that over-production is not the result of large-scale production or machinery, but of miscalculation on the part of the producers. If the demand could be exactly anticipated and measured and if the activities of individual producers could be thoroughly regulated, there could not arise any opportunity for over-production ; but since this is not an accomplished fact, over-production is a frequent occurrence.

On weighing the advantages and disadvantages of machinery, theoretically as well as practically, and considering the history of economic development of the various countries of the world, we feel convinced that the salvation of our country the present age lies in rapid mechanisation.

### INTERMEDIATE QUESTIONS

1. Discuss the distinction between Fixed and Circulating Capital. (Bombay, I. A., 1940).
2. Discuss the factors which influence the growth of capital in a modern community. (Bombay, I. A., 1940).
3. Discuss the factors which influence the growth of capital in a country, (Bombay, I. Com., 1939).
4. State the conditions that promote and those that hamper the accumulation of capital. (Karachi, I. Com., 1952).
5. What is capital ? State the factor upon which accumulation of capital in a country depends. (M. B., I. A., 1952).
6. Carefully define the term capital and point out the causes which lead to the accumulation of capital in a country. (M. B., I. Com., 1953).
7. Describe the advantages and disadvantages of the use of machinery. (Osmania, I. A., 1951).
8. How does capital grow in a country ? Illustrate your answer with reference to India. (Punjab, Inter., 1949).
9. Do you consider the use of machinery in India to be (a) absolute necessity or superfluous, (b) blessing or curse ? (Punjab, Inter., 1949).



10. Point out the various advantages of machinery. Discuss its disadvantages as well. (Punjab, Inter., 1947).

11. What is capital? Discuss the factors responsible for the accumulation of capital. (Raj., I. A., 1948).

12. What are the conditions that favour the accumulation of capital? How are these conditions applicable in the case of Indian farmers? (Raj., I. A., 1951).

13. Capital is subdivided into (i) fixed and circulating capital, (ii) specialised and free capital. Give examples of each sort of capital. (Raj., I. A., 1954).

14. Write a short note on Circulating Capital. (Raj., I. A., 1957).

15. Discuss the factors which bring about the accumulation of capital. (Raj., I. Com., 1951).

16. Describe the advantages and disadvantages of the employment of machinery in production. (Raj., I. Com., 1951).

17. What do you understand by the term Capital? Indicate the conditions that determine its supply, and examine to what extent these are fulfilled in our country. (Utkal, I. A., 1953).

18. Discuss the effects of the introduction of machinery upon labour. (Utkal, I. A., 1952).

19. Describe the part played by capital in production and explain how the growth of capital can be promoted in a country. (Utkal, I. Com., 1952).

20. Describe the factors responsible for the accumulation of capital in a country. Are they present in India? (Utkal, I. Com., 1950).

## CHAPTER 31

### ENTERPRISE

Normally it may be presumed that an independent entrepreneur does not make less than a manager of like abilities, and perhaps he does not make much more. If the remuneration of the manager is just equal to the amount which he produces, then remuneration of the entrepreneur is not very different from the amount he produces.—*Edgeworth*.

Business of every size and description involves a certain amount of 'risk' or what is called in India *jokhim*. A businessman has to anticipate or forecast the quantity and quality of goods likely to be demanded in the market in the near future, and to produce or purchase goods in the light of this estimate. If, due to some reason or the other, his forecast goes wrong, he stands to suffer a loss. For instance, a mill-owner may produce goods of a particular kind in the hope that they will be in demand ; but the demand may unexpectedly shift from the mill cloth to the hand-woven cloth. The goods produced by the said mill will not then be sold and the mill-owner will suffer a loss. Similarly the actual cost of raw materials, the rate of interest and the rate of wages may exceed the anticipated cost, with the result that the cost of production may rise unexpectedly and a loss may result. Just as a business stands to lose, similarly it stands to gain as well. It may earn huge profits if unforeseen favourable events occur. Evidently there is an element of 'uncertainty' in the business. *This factor of uncertainty or risk is called by economists 'enterprise'*. The person who undertakes the risk or bears the uncertainty is known as the *entrepreneur*<sup>1</sup>.

#### Enterprise and Organisation

Some economists think that organisation and enterprise are interchangeable words ; and these two functions are performed by one and the same man who may be called either an entrepreneur or an organiser. This opinion is incorrect inasmuch as these functions may or may not be combined in one man. The joint stock company is the most typical business unit of the modern age, and in it the function of organisation is undertaken by paid managers while the function of risk-taking is performed by shareholders. Apart from this objection of a practical nature, it may be added as a theoretical argument that in theory the functions of organisation and risk-taking are definitely separate and can be conceived separately. As such, it is better to consider them as two different factors of production.

#### Functions of the Entrepreneur

In the domain of production, enterprise plays an important *role*. No production is possible unless somebody is prepared to bear the risk

<sup>1</sup> The word "entrepreneur" is of French origin and means the "undertaker." The English equivalents of "entrepreneur" are "undertaker" and "enterpriser." But these are hardly used, the "entrepreneur" being the usual expression adopted in English.



which production involves. This is more so today than it has been ever before. Nowadays demand has to be anticipated and goods have to be produced according to such anticipation.) The anticipation or forecast depends on a large number of variable factors so that no finality can be attached to the estimates. The element of risk in modern business can, therefore, be well appreciated. As markets are growing larger and uncertain, as the processes of production are becoming increasingly complex, lengthy and round-about, as consumers are being led away more and more by vagaries of fashion, and finally as new inventions are increasing and methods of production are being revolutionized, the element of risk in business is also increasing. And the importance of enterprise and of entrepreneur in the modern economic society has become supreme.

### INTERMEDIATE QUESTIONS

1. Explain the functions performed by the entrepreneur in modern business organization. (Karachi, I. Com., 1952).
2. Explain the functions of the entrepreneur. (Poona, I. A., 1950).
3. What are the functions of an enterpriser in modern industry? How far are these functions performed by the village artisans in India? (Raj., I. A., 1951).

## CHAPTER 32

### ORGANIZATION

Along with advance of organization, every part, more limited in its office, performs its office better; the means of exchanging benefits become greater; each aids all and all aid each with increasing efficiency; and the total activity we call life, individual or national, augments.—*Herbert Spencer*.

#### § 1. MEANING OF ORGANIZATION

We have so far studied the four factors of production, namely, land, labour, capital and enterprise. We shall now consider the different ways in which production in our days has come to be organised. We have studied, so to say, the nature of the various parts of a machine and shall now discuss the different ways and methods of putting these parts together and learn how they act as a unit when the whole machine is set up.

Production, whatever be its nature and scale, has to be properly organised. Even so simple a producer as a small vegetable-grower has to procure good seeds at a cheap rate, decide how much land will be cultivated and what will be grown thereon, arrange for manuring and watering, and look to profitable marketing of the vegetables grown. These functions become complicated and numerous in a typical factory of today. The nature and importance of these functions, collectively known as organisation, show that efficiency of production must largely depend upon proper organisation, upon proper assemblage of the various factors of production in most effective proportions. *Organisation may, then, be defined as the attempt towards bringing the various factors of production into the most effective co-operation.*

#### Place of Organisation in Economics

In the early days of the development of economic theory, organisation was not considered to be a factor of production. It does not mean, however, that in those times production was carried on, or could be carried on, without organisation. As a matter of fact, some sort of organisation is traceable even in very primitive forms and methods of production. But organisation was not very important in the industrial life of those days, so that it did not attract the attention of economists. With the progress of society, however, organisation began to acquire importance. Large-scale production, division of labour, international markets and such other economic complexities pushed the importance of organisation to the forefront. It is now realised more than ever before that the agents of production cannot achieve much unless they are in effective co-operation. Their strength lies in their union under one management which will assume lead in production and endeavour to utilise all the factors so as to achieve the best results and obtain highest returns. Organisation has now come to occupy an important place in the theory of Economics.



## § 2. THE FUNCTIONS OF THE ORGANISER

The task of an organiser, it may be emphasised, is not limited to the mere assembly of the various factors of production ; for he has to perform many other delicate and important functions as well. They may be explained by comparing the functions of a master blacksmith with the functions of his apprentice. The apprentice simply works according to the directions given by the master blacksmith. But the work of the latter is far more difficult and responsible. Besides devoting himself to the work of production, he has to collect the necessary raw materials like iron and coal. When there is pressure of work, he has to employ outside workers on the payment of wages. He may be required to borrow money, if there is a shortage of capital. Sometimes it is he who has to find out entrepreneurs who willingly bear the risk of the enterprise. Besides combining the services of all the factors of production, he has to estimate the probable demand. After the collection of the various factors, he has to yoke them together in production and to bring them into most effective co-operation. He has to limit production according to his estimate of the probable demand for his wares when ready. Then he has to arrange for their proper marketing. He has to be alert and keep in touch with the prices at which his competitors are selling their goods and to increase or decrease the prices of his own goods according to the state of competition. All these activities (excluding his labour in the actual preparation of the articles) come under organisation. Unlike the apprentice, who is concerned only with a particular task which is entrusted to him, the organiser is concerned with production as a whole.

The above is a simple instance. A study of the functions of the organiser or manager of a big factory will throw more light on the importance of his *role* and on the many-sidedness of his contribution. In every form of production, it is he who combines the various factors of production in the most systematic and most profitable manner, from the initial productive stage down to the sale of manufactured articles. Like the general who marshals the forces under his command and upon whose efficiency depends the victory or defeat in war, the organiser determines the success or otherwise of business establishment. Specifically his more important functions are the following :

1. Bringing into co-operation the various factors of production ;
2. Organisation of labour ;
3. Provision of necessary tools and appliances ;
4. Determination of quantity and quality of product ;
5. The marketing of goods ; and
6. Miscellaneous functions.

(1) *The organiser assembles land, labour, capital and enterprise.* This task of assemblage is preceded by an investigation of the most

profitable channel of investing productive resources. After completing this investigation, he has to pick up certain entrepreneurs willing to undertake the business risk. He also persuades capitalists to contribute their capital to the business. Then he has to employ suitable labourers and to get proper raw materials. All this preliminary work which must be done before production can begin, is performed by the organiser.<sup>1</sup>

### Organisation

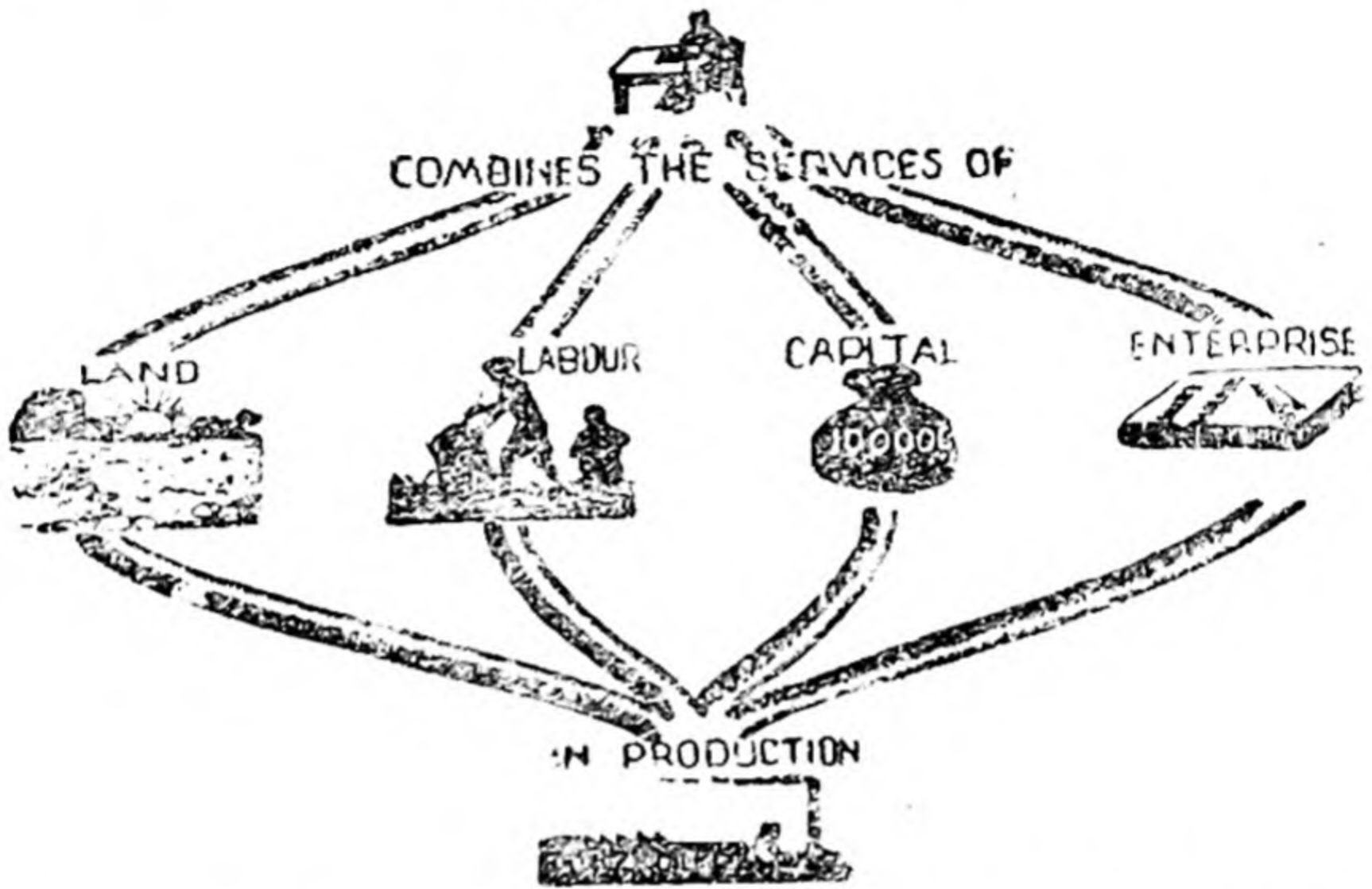


Fig. 33. Illustrating the part played by organisation in the production of wealth.

(2) *The organisation of labour* is his next important function. He has to divide labourers into several groups according to their level of intelligence, skill and aptitude, and entrust to each group the work best suited to it. He has, moreover, to be careful to see that no labourer remains idle and none is over-worked. He has to arrange production in various stages in such a manner that as soon as a labourer has finished his part of work on a particular commodity, another commodity may come before him immediately for similar operation. He has again to look to the proper supervision of labourers while they are at work ; and to ascertain that the industrious and the efficient are rewarded and the indolent and the inefficient penalised.

(3) *The organiser provides labourers with proper tools, appliances and machinery.* He has to see that the implements and machinery

<sup>1</sup> It must not be supposed that one man can supply only one factor of production and not more. In fact, a man can and does supply more than one factor. Take the case of a shareholder in a joint stock company. He is a capitalist because he has contributed capital. He is also risk-taker for he is liable to a loss and entitled to profit. Similarly a person may contribute capital as well as organise production, thus becoming capitalist and organiser at the same time.



are suited both to labourers as well as to raw materials on which they are used. Machinery have to be kept up-to-date and the organiser has to be in touch with the mechanical advances made in his branch of trade. He has also to take the care that the machinery remains fully employed ; that the motive power is adequate ; and that the skill of labourers is well maintained.

(4) *Above all, the organiser determines the quantity and quality of the output.* Goods produced are meant for sale ; and business success depends upon the profitable disposal of the goods produced. It is therefore, essential that the goods should be produced in such quantities and of such quality as may find a ready and profitable market. To perform this function efficiently the organiser has to be in touch with the market conditions and to find out what are the articles in demand and what fraction of the total demand can be captured by him. For instance, if an organiser finds that canvas shoes are well in demand, and of the existing demand he can manage to secure the demand for 1,000 pairs of shoes, then he prepares 1,000 pairs of canvas shoes. In anticipating the demand the organiser has, of course, to foresee the changes in fashion or taste and in the economic position of the purchasers, that might possibly take place in immediate future

(5) *The problem of marketing the goods produced is also tackled by the organiser.* Speedy sale of the goods at maximum price is the ideal which he tries to achieve. For this purpose he has to know all the markets in which his goods can be sold ; the prices ruling in those markets ; the prices at which his competitors are selling, or can sell their goods ; and such other factors. It is this sort of systematic investigation which gives success to the organiser.

(6) Besides these, an organiser has to perform a large number of *miscellaneous functions*. He has to observe the principle of substitution and to know the implications of the laws of increasing, decreasing and constant returns. All these factors have important influence on production.

### § 3. EFFICIENCY OF ORGANISATION

Efficiency of organisation is to be measured by the degree of economy in production. The best organiser makes the best use of the factors of production and thus makes the business yield the highest profit. Efficiency of organisation may, therefore, be defined as the capacity to manage production with economy.

Efficiency of organisation depends partly upon the efficiency of various factors of production and partly upon the organising capacity of the organiser himself. The former has been discussed in its proper place in this book. The latter is discussed below.

In order that an organiser may be really efficient, he must possess the following qualities :

(1) *Foresight.* An organiser should be capable of anticipating demand in its quantitative and qualitative aspects. He should also be able to take account of the factors that might bring about a



change in the nature and extent of the anticipated demand. Such factors may be climatic, or social, or political, or economic. He should also be able to visualise the probable cost of production on the basis of the cost of individual factors.

(2) *Ability to Organise Labour.* The organisation of labourers is of great importance in production and requires great skill on the part of the organiser. The key test of the efficiency of the organiser is his ability to take the best out of each labourer. His attitude should not be tyrannical but sympathetic and kind. At the same time he should penalise the weak and lazy labourers and give reward to the diligent and efficient workers. He should create an atmosphere where labourers may naturally realise that if they improve their work and efficiency, they will get the life which they deserve.

(3) *Technical Knowledge.* An organiser should also possess sound technical knowledge. He must know something about the nature, kind, availability and price of raw materials used in his business. Up-to-date knowledge of practical business and marketing conditions is absolutely essential. He should also be in touch with the working and mechanism of the machinery. So important is this factor in production that there is a distinct tendency in America in particular and everywhere else in general to appoint engineers as organisers.

(4) *Ability to Inspire Confidence.* Modern business depends, to a fairly large extent, upon borrowed capital which cannot be got unless the management of the concern is sound and honest and inspires confidence in the hearts of capitalists. An organiser has to possess the ability to inspire such confidence.

All such qualities are found in some persons while they are absent in others. Poet, it is said, is born not made; the same remark applies to an organiser. The organisational ability is something God-given and is rare. It can be improved through experience and training. Just as good crops are the result more of natural conditions than of human skill, similarly successful business is the result more of natural ability of the organiser than of his acquired qualities.

#### § 4. PROBLEMS OF ORGANISATION

The most important problems which an organiser has to solve are three :

1. The problem of division of labour (including the localisation of industry).
2. The problem of the scale of production.
3. The problem of the legal organisation of the business concern

We shall devote the next three chapters to these three problems of organisation.

#### INTERMEDIATE QUESTIONS

1. Explain fully the duties of an organiser in modern production and show if his work is indispensable in industrial production. Give reasons in support of your view. (M. B., I. A., 1953).
2. What part does the organiser play in promoting the economic interest of society in modern times? How far do you justify his being called the 'Captain of Industry'? (Punjab, Inter., 1948).



## CHAPTER 33

### DIVISION OF LABOUR AND LOCALISATION

This great increase in the quantity of work, which, in consequence of the division of labour, the same number of people are capable of performing, is owing the three different circumstances ; first, to the increase of dexterity in every particular workman ; secondly, to the saving of the time which is commonly lost in passing from one species of work to another ; and lastly, to the invention of a great number of machines which facilitate and abridge labour, and enable one man to do the work of many.—*Adam Smith*.

#### § 1. EXPLANATION AND EFFECTS OF DIVISION OF LABOUR

The first important problem with which a organiser has to deal is the division of labour. He divides and sub-divides the entire labour force into a number of groups, each performing one complete or incomplete process. One labourer thus comes to perform only one process or a part of process out of a number of processes necessary to produce a commodity. This is the division of labour which has immensely benefited humanity inasmuch as it has increased output at reduced cost per unit.

Division of labour had not made its appearance in the very early days of human habitation. Each man or family of those days satisfied all of his or its wants through individual efforts. If somebody wanted a hut, he had to prepare it himself. If he wanted fur to cover his person, he killed an animal and prepared the fur. Similar considerations applied to each commodity wanted by human beings. But as society made progress, human wants increased ; man began to make efforts to devise ways and means of increasing production to satisfy his fast-multiplying wants. In this attempt, he hit upon the division of labour. It was realised that production could be increased and more wants satisfied with the same amount of labour if each man was made to produce that commodity for the production of which he was most fitted ; and to exchange his surplus commodities with the surplus commodities of other persons which he required. For instance, if a man was expert as a carpenter, he was to make chairs and tables all the time ; and to exchange his surplus chairs and tables for food, cloth, and other articles of his requirements produced by other persons. Society was thus split up in a number of occupations ; and division of labour was thus introduced. The advantages of this invention were so great that it was only extended in its scope but its form was also made more complex and far-reaching, as we shall presently study. Division of labour has become a very fundamental characteristic of the modern age.

Two conditions must be present to make division of labour possible. Firstly, labourers must work in some sort of *co-operation*. Unless there is a group of labourers, they cannot obviously be divided. A single worker is incapable of division. Secondly, *exchange* of articles should be possible. If division of labour is introduced, a



man will produce one or a few commodities only ; and in order to obtain other articles for his consumption he will have to exchange his surplus output for the required articles produced by others. Co-operation of labourers precedes and the system of exchange follows the division of labour.

### Forms of Division of Labour

The following are the stages or forms of division of labour :

(1) *Division into Occupations and Professions.* In this form of division of labour, workers are divided into various groups according to the occupations or professions which they are best suited to pursue. For instance, some persons may become cultivators, some weavers, some house-builders, some fishermen, some rope-makers, some doctors, some teachers, and so forth. This form of division of labour according to occupations is known as *Occupational Division of Labour*. Under it a labourer specialises in a particular occupation to the exclusion of other occupations.

Occupational division of labour was the first to appear on the scene. It appeared at an early stage of economic development. The assignment of separate duties to men and women, or of special functions to the king, the warrior, the priest, the medicine-man (thus giving rise to certain social classes) are examples of this form of division of labour in the primitive society. A very good illustration of occupational division of labour is the caste system prevalent among the Hindus, according to which the society is split up into four broad divisions, namely, *Brahmins*, *Kshatriyas*, *Vaishyas* and *Shudras*, each entrusted with definite functions.

(2) *Division into Complete Processes.* The next step in the evolution of the division of labour was the breaking up of each occupation into a number of complete processes involved in the preparation of an article, and the sub-division of labourers into the corresponding number of groups. This is known as *Division of Labour into Complete Processes*. Each group of labourers and each member thereof devotes himself, under this form of division of labour, only to one complete process. The product of one group of labourers is only a semi-manufactured article which is passed on to the other group for the next operation, and so on till it takes the final shape. In an American leather factory, for example, shoe-making is divided into 80 different processes ; and labourers of such a factory are divided into 80 groups, each entrusted with a particular process only.

The division of labour into complete processes arises late in the history of human progress and is the second stage in the evolution of this phenomenon. This is the result of considerable increase in human wants to satisfy which the extent of division of labour has to be pushed further.

(3) *Division into Incomplete Processes.* With the introduction of machinery and factory system, and with multiplication of wants, division of labour is pushed still further. Each process is now subdivided into various incomplete processes. Labourers are accordingly



divided into different groups, each of which is made to devote itself to one incomplete process only. The work of each is merely a contribution to some joint result (semi-manufactured or finished product) from which it cannot be separated and apart from which it has no value. Obviously the worker now devotes himself to a still smaller part of the finished article than under the second stage of division of labour.

(4) *Territorial Division of Labour or Localisation of Industry.* The division of labour into sub-processes is associated with the localisation of particular industries and callings in certain regions. Industries tend to localise in a particular place or region mainly due to some favourable geographical, geological, climatic, economic or political conditions found there. Due to the localisation of the industry, labourers of that place also acquire special skill in the processes or sub-processes of that industry. The availability of such skilled labour is an important cause of localisation. The localisation of industry is a form of division of labour and is called territorial division of labour.

### **Simple and Complex Division of Labour**

Division of labour is sometimes classified into (1) simple division of labour, and (2) complex division of labour. "Division of labour is described as simple when two or more men, working in the same ways, co-operate to perform a single task, too expensive, difficult or burdensome to be carried out effectively by one man alone, such as mowing or ploughing of field, lifting heavy goods or hoisting sail of a ship. The division is described as complex when each man or a group of men undertakes a specialised function which is contributory only to the final result; in other words, when several persons or groups co-operate to produce some result by each undertaking some contributory part, as for example the complex division of the cotton industry".

The use of the term *simple division of labour* in the above sense, is not free from objection. It is, strictly speaking, not a form of division of labour at all. When some labourers jointly do a piece of work, each working in the same way, they are not divided. They work in co-operation; but this co-operation of labourers cannot be called division of labour.

If we want to retain the use of the terms *simple division of labour* and *complex division of labour*, we may use the former in the sense of occupational division of labour, while the latter may be made to refer to the other three forms of the division of labour.

### **Advantages of Division of Labour**

Division of labour results in an increase in the productive capacity of labourers. This increase in productive power is brought about due to the following factors.

(1) *Gain in Adaptation.* The great advantage of division of labour is that it makes possible the division of labourers into various groups according to their level of intelligence, physical strength and natural bent of mind; and the allocation to each of them of the task they are best fitted for. Consequently the waste which sometimes follows due to the employment of skilled men to a job which could



very well be performed by semi-skilled or even unskilled labourers, or the employment of a less skilled man for a highly skilled work, are avoided. The capacity of each man is applied to the best advantage.

(2) *Gain in Skill.* Another advantage of division of labour is that it requires the labourer to move his muscles, brain and eyes in one particular manner all the time he works ; consequently his limbs become automatic, quick and precise. The skill of a man thus increases through constant practice and specialisation. In the absence of division of labour, a labourer would be a Jack of all trades and probably master of none.

(3) *Increased Use of Machinery.* The division of labour brings about a minute sub-division of productive processes. The sub-processes become so simple that many of them can be done by a machine. Division of labour thus leads to an extensive use of machinery. Machinery increases output, lower cost per unit, diminish the strain on labourers and bring about other advantages which have already been discussed.

(4) *Increase in Number of Inventions.* Inventions of machinery, which are labour-saving devices, owe their origin to the division of labour. This is due to two reasons. Firstly, each work is divided in such minute and simple processes that the scope for inventions becomes large. Secondly, when the labourer works on one machine all the time, he gets the occasion for thinking out the improvements that can be made in that machinery.

(5) *Economy of Implements and Capital.* Under division of labour each labourer is engaged in one operation only and requires a few specialised tools which are constantly used all the time. Implements and machinery thus find full employment. Again, since he possesses only few implements, he takes proper care of them and is not likely to lose them.

(6) *Improvement in the Quality of the Product.* Since the finished product receives touches at the hands of master craftsmen, as specialists in their particular work, its quality is bound to be excellent.

(7) *Reduction in the Period of Apprenticeship.* Division of labour brings about a sub-division of production into simple sub-processes and each labourer is required to engage himself only in one sub-process rather than in the entire production. Therefore, he has to learn merely a part of the work and the period of his apprenticeship becomes short. He saves time and money as a consequence.

(8) *Saving of Time.* Being engaged only in one operation under division of labour, a labourer is not required to move from one place or task to another place or task every now and then or to put down one tool and take up another. The time which is lost in changing work, place and tool is thus saved.

(9) *Saving of Skill.* Since the labourer is given the task for which he is best fitted, his capacity is used to the best advantage and his skill is not wasted. He is also relieved of much monotonous and



cheap work which can be performed by women and children and in some cases even by the crippled and the blind.

(10) *Increase in Mobility.* When the processes of production are minutely divided and sub-divided, they become very simple and similar to each other. It becomes easier for the labourer then to move from one occupation to another. Mobility of labour is thus increased.

(11) *Expansion and Diversification of Occupations.* The invention and use of new machinery open fresh avenues of employment. Employment as a whole increases; and even women and children and partly disabled persons get some work.

(12) *Other Advantages to Labourers.* Besides these advantages, labourers gain in other forms as well. Division of labour is possible only when a large number of workers work together. Labourers thus come into contact with each other and begin to feel a sense of unity and common interest. They form trade unions and fight for a reduction in the hours of work and an increase in wages, and try to improve their conditions in other ways.

(13) *Effects on Production as a Whole.* The ultimate effect of division of labour on production as a whole is that output improves both in quantity and quality, and is obtained at a reduced cost per unit.

### **Disadvantages of Division of Labour**

The imposing advantages of division of labour should not lead to the ignorance of its disadvantages. Its disadvantages can be grouped as (a) direct and (b) indirect.

#### **(A) Direct Disadvantages**

(1) *Loss of Efficiency and Responsibility.* Specialisation narrows down one's mental outlook. A labourer is required to do and know about only a part of work; he does not usually know more than that. The range of his usefulness is also reduced. He has to repeat the same simple process days in and days out and thus becomes an automaton. It is, indeed, a sad confession for a man to make that during his whole life he has done nothing more than fashioning the head of a pin or sharpening its point! Moreover, since the raw material passes through several hands before it is finally finished, no labourer can be made responsible for the excellence of the article as a whole. Labourers lose the sense of responsibility since their responsibility cannot be fixed nor can their irresponsibility be detected.

(2) *Loss of Interest.* When a man manufactures one whole article, he takes pleasure and interest in preparing it. The beauty of article pleases its maker, brings credit to him and gives him satisfaction that his work has brought joy and satisfaction to others. But when he is made to work in a factory, in a scheme of mass production where his contribution cannot be located, he loses interest in the job.

(3) *Monotony.* A labourer who performs the same task all the time he works, begins to feel monotonous. The feeding of a printing machine or the folding of a newspaper and doing nothing else is



certainly a dull business. Monotony gives rise to industrial fatigue, mind-wandering and day-dreaming, which reduce the efficiency of the labourer and his putput. To do away with this monotony labourers are sometimes allotted different kinds of work.

(4) *Employment of Women and Children.* Division of labour creates employment for women and children, but very often the task is too arduous and laborious for them and seriously injures their health and hinders their growth. This is a matter of great national concern, since weak mothers give birth to weak children, and weak children turn out to be weak men of tomorrow.

(5) *Loss of Mobility.* If a workman is engaged in doing only one kind of work for some time, he might become unfit for any other occupation. The mobility of labour may thus be seriously curtailed. But it must be pointed out, if division of labour is carried to a fairly great extent, the processes and sub-processes of different industries may become so simple as to be almost alike, in which case the mobility of labour may actually increase.

### **(B) Indirect Disadvantages**

Division of labour also brings about certain indirect disadvantages. Associated, as it is, with the working together of a large number of labourers in a factory or a mill, it gives rise to all the disadvantages of factory system, like the over-crowding of towns and the loss of personal contact between the employer and the employee. Working in group also makes a labourer dependent upon other labourers. If a man is absent and one part of the job is stopped, the entire production may come to a standstill.

Obviously the advantages of division of labour far exceed the alleged disadvantages. Steps have been taken by enlightened organisers to reduce these disadvantages to the minimum. "Short hours; leaving more time for leisure, rest pauses, welfare schemes involving the provision of rest-rooms, reading-rooms, dining-rooms and playing fields : co-partnership arrangement and profit-sharing schemes; these are among the methods now being widely adopted to restore to the workers some measure of responsibility and to counteract the effects of routine and monotony".<sup>1</sup>

### **Limitations of the Division of Labour**

Adam Smith, the Father of Economics, has treated the subject of division of labour with great ability and it has not yet been equalled. He mentions the following limitations of the division of labour :

(1) *The Nature of Occupation.* The extent to which the division of labour can be carried depends upon the nature of occupation, for that determines the number of processes or sub-processes involved therein. There is, of course, a limit beyond which the sub-division of processes cannot be carried.

(2) *The Extent of Market.* Whether the division of labour can be carried to the extent rendered possible by the nature of the

<sup>1</sup> Thomas, *Element of Economics*, p. 110.



industry, depends upon the extent of market. If the market is big the division of labour also tends to be carried to an advanced stage. If the market, on the other hand, is small, the division of labour must be limited.

(3) *The Machinery of Commerce.* The extent of the market is determined by the machinery of commerce, the facility of transport, the banking system, and the like. In order to be able to trade, people must be able to communicate with each other, to send goods cheaply and quickly, to receive and pay money satisfactorily, and so forth.

## § 2. THE LOCALISATION OF INDUSTRIES

There are certain regions or districts which possess special advantages conducive to the development of a particular industry or industries. Attracted by these favourable factors, industries tend to congregate in such regions and districts, till their names become associated with those industries. The tendency of industries to congregate at one particular place is known as localisation of industries or the territorial division of labour. Good instances of localisation of industries in our country are furnished by the jute industry which is localised in the neighbourhood of Calcutta ; printing and dyeing industry which is localised in Farrukhabad ; glass and bangles industry centred in Firozabad ; the cotton textile industry associated with Bombay and Ahmedabad ; sugar industry of U. P. and Bihar ; and iron and steel industry in Tatanagar.

When a factory is newly started, the organiser has to determine its locality. To arrive at the right decision, he should obtain full knowledge of the places where that industry is localized or can be localized. After a careful consideration of the relative advantages of various places from the point of view of availability of raw materials, skilled labour, good markets, means of communication and transport, and so forth, he should locate the industry at the most favourable site. The correctness of this decision is very important and determines, to a fairly large extent, the success or otherwise of the venture. Usually it happens that organisers in the same industry select the same centre or district for the localisation of their factories and thus tend to gravitate to the same region.

### Causes of Localisation

It is interesting to investigate into the causes which attract organisers to the same place ; in other words, which lead to the localisation of industries. The more important of such causes are mentioned below :

(1) *Availability of Power.* The most important cause of the localisation of industries is the availability of power. Coal is perhaps the most important source of power at the present time. It is not economical to carry coal over a long distance because it is cheap in proportion to its bulk and cannot, therefore, bear the cost of long transport ; consequently industries tend to be drawn to coalfields. In recent times hydro-electric power has acquired prominence. Hydro-electric stations may attract certain industries in their neighbourhood ; but



they usually decentralize them by making the supply of cheap power over long distances, through transmission lines, possible.

(2) *Availability of Raw Materials.* Raw materials are important ingredients of manufacturing since in their absence no production is possible. As such, the regions where raw materials are available sometimes become the centres of industries. The jute industry of Calcutta and iron and steel industry of Tatanagar are partly the result of this cause. Availability of raw materials is a matter of supreme importance in those cases where the materials cannot be economically transported due to their extreme cheapness in proportion to their bulk or due to their fixity. Mining must be carried on where mines exist and lumbering industry must be localised where forests are to be found.

(3) *Climate.* Climate helps in the growth of industries inasmuch as it determines the conditions of work. Extremes of temperature are not suited to hard work. The regions with temperate climate are, therefore, important for localisation of industries. In certain cases the climate acquires special importance as in the case of cotton textile industry. This industry requires moist climate so that fine thread could be spun out of cotton. If climate is dry, the thread soon becomes dry and breaks. It is the climate of Bombay which has made it the centre of cotton manufacturing industry of India.

(4) *Availability of Skilled Labour.* The origin and persistence of localisation is sometimes the result of availability of skilled labour. The glass bangles manufacturing industry of India is localised at Firozabad not because it is near the sources of raw materials or the markets but simply because skilled labour is available here. The localisation of printing and dyeing industry at Farrukhabad is also to be explained by the availability of skilled labour there.

(5) *The Momentum of an Early Start.* Sometimes a place where an industry gets an early start begins to enjoy so many advantages with respect to that industry that ultimately it gets localised there. New entrants into business find it economical and profitable to set up a factory at the old place rather than at a new place.

(6) *Nearness to Markets.* Since the manufactured articles have to be transported to the markets for sale, the nearness of the market saves the cost of transport. Proximity of markets is consequently an important factor conducive to the localisation of industries. The cotton textile mills, for instance, have recently been started in our country in the interior at the places of the actual demand of cotton textiles.

(7) *Availability of Means of Transport and Communication.* The disadvantage of distant markets is reduced if cheap, quick and easy means of transport and communication are available; consequently an industry may be localised at a place remote from the markets if efficient means of transport exist. The importance of means of transport to the localisation of industries can be better appreciated if we realise that quite a large percentage of the total manufacturing cost is made up of transport charges of the raw materials to the factories and of the finished products from the factories to the markets.



(8) *Accessibility of Market.* Markets should not only exist in the geographical sense but should also be available in the economic sense. The accessibility of markets implies that the purchasers in those markets should have the demand for goods ; the competition therein should not be prohibitive ; and there should not exist very high import and export or octroi duties which check the movement of goods. It is interesting to note that the import of motor cars and lorries into India is subject to high import duties but the import of motor accessories and parts is not so liable ; consequently many foreign companies have from abroad established motor factories in India, which simply fit the parts imported and sell complete lorries, thus effecting a saving in import duties.

(9) *Miscellaneous Causes.* There are various miscellaneous considerations also which favour the localisation of industries. The availability of water for factory use and of cheap land are some of the instances.

### Advantages of Localisation

The localisation of industries in any particular region is a matter of great advantage. The following are the important advantages thereof :

(1) *Growth of Skill.* When an industry is localised in a particular place, the labourers of that place acquire special skill in that industry. The skill once acquired becomes hereditary and is passed on from father to son. Small children see every day the work that is done in the factories and through constant observation helped by natural aptitude, learn the intricacies of trade in no time.

(2) *Growth of a Local Market for Skill.* Localisation gives rise to a local market for a particular kind of skilled labour. An organiser of a new factory in that line can find skilled labour in that market, while the labourers skilled in that line can hope to find employment there. Not only does the labour become specialised, but specialised machinery also makes its appearance. Localisation enables the introduction of a minute division of labour, co-operation of a large number of entrepreneurs of common interest, and a keen sense of competition in a productive efficiency, all of which lead to the invention and use of highly specialised machinery.

(3) *Reputation or Goodwill.* When an industry is localised in a particular place, the products of that place earn a reputation or goodwill for themselves, so that the articles manufactured there find a ready market. Dacca muslin and Lucknow chintzes (*chhint*) are celebrated even up to this day, and find more willing purchasers than similar products of other regions. Sheffield cutlery is still preferred to several other types of similar goods.

(4) *Growth of Subsidiary Industries.* Near the industrial centre, many subsidiary industries tend to grow. Thus the iron and steel industry generally leads to the establishment of cement industry because the slag, which is the waste product of the iron and steel factory, happens to be the raw material of cement industry.



(5) *Growth of Supplementary Industries.* Localisation of industries also leads to the development of supplementary industries which provide employment to the women and children of the male labourers. Centres of heavy industries usually become the centres of silk industry because cheap labour of women and children is available there.

(6) *Growth of Machinery of Commerce.* An industrial centre becomes a bee-hive of commerce. Huge quantities of raw materials or coal pour in daily, and large amounts of products are sent out regularly. Trade on such a large scale requires the growth of machinery of commerce, which is brought into being. The centres where industries are localised have efficient means of communication and transport, banking organisation and capital market, all of which are valuable national assets.

### Disadvantages of Localisation

Localisation of industries which has so many advantages is also the cause of several disadvantages. These disadvantages are enumerated below :

(1) *Narrow Development of Human Skill.* Localisation of industries causes the demand for certain type or types of skill. The labourers possessing such skill hardly get the time to develop other aspects of their intelligence. Localisation thus narrows the intelligence and skill of mind. It also imposes a limit to the mobility of growing population. The population of a centre where cotton textile industry is localised may not be able to emigrate because it can do no other work.

(2) *Risk of Widespread Economic Suffering.* Localisation makes an industrial centre almost solely dependent on one industry. It may have to suffer seriously if that industry faces bad times. During the depression, profits may be displaced by losses; factories may close down; labourers may be thrown out of employment and may not find other sources of earning a livelihood.

(3) *Evils of Industrial Centres.* Localisation is often associated with the physical, economic, moral and social evils which grow unchecked in factories and in industrial centres.

### Remedies

The above disadvantages of localisation can, however, be remedied. The risk of one-sided development of human skill and widespread economic sufferings can be protected against, if more than one industry is started at one centre. Localisation itself partly supplies this remedy in the form of the development of subsidiary and supplementary industries. Remedies for the evils of industrial centres have already been discussed.

### INTERMEDIATE QUESTIONS

1. Discuss the advantages and drawback of localisation of industry. (Andhra, Inter., 1950).
2. Discuss the advantages and disadvantages of division of labour (M. B., I. A., 1952).



3. Examine critically the causes which bring about localisation of industry. (M. B., I. Com., 1952).
4. What is meant by Division of Labour? Why is it adopted in production? (Mysore, Inter., 1943).
5. State the advantages and disadvantages of the Localisation of Industries. (Osmania, I. A., 1952).
6. Write a note on Localisation of Industries. (Poona, I. A., 1949).
7. Give the advantages and disadvantages of Division of Labour. (Punjab, Inter., 1950).
8. Write a note on Territorial Division of Labour. (Raj., I. A., 1952).
9. What are the causes of Localisation of Industries? Discuss with reference to cotton textile industry in Bombay. (Raj., I. A., 1951).
10. What is meant by Division of Labour? Discuss its advantages and disadvantages. (Raj., I. A., 1948).
11. Why is it that particular localities are found to specialise in certain industries? Describe the advantages of such specialisation. (Raj., I. Com., 1952).
12. What do you understand by Division of Labour? Describe its merits and defects. (Raj., I. Com., 1947).
13. What do you understand by Localisation of Industries? Examine the factors which bring about localisation of industries. (Raj., I. Com., 1946).
14. What are the advantages of localisation of industries? Account for the localisation of the Indian jute mill industry on the banks of the Hooghly. (Utkal, I. A., 1952).
15. Discuss the advantages and disadvantages of the Division of Labour. (Utkal, I. Com., 1951 S).
16. What are the advantages and disadvantages of Localisation of Industries? (Utkal, I. Con., 1951 S).

## CHAPTER 34

### THE SCALE OF PRODUCTION

The advantages which large business has over a small one are conspicuous in manufacture. But there is a strong tendency for large establishments to drive out small ones in many other industries: in particular the retail trade is being transformed and the shopkeeper is losing ground daily.—*Marshall*.

The size of business undertakings has greatly increased in recent times. Production on a large scale is a very important feature of modern industrial society. Formerly we used to purchase our shoes from a petty cobbler and cloth from an ordinary weaver ; but now these articles are supplied by big factories of Flex and Bata and gigantic cotton mills of Bombay and Ahmedabad. "The typical unit of production", says Hobson, "is no longer a single family or a small group of persons working with a few cheap, simple tools or small quantities of raw materials, but a compact and closely organised mass of labour composed of hundreds of thousands of individuals, co-operating with large quantities of expensive and intricate machinery through which pass a continuous and mighty volume of raw material on its journey to the hands of the consuming public". When production is carried with large quantities of raw materials, large amount of capital, large labour force, largely efficient organisation and large risk, it is called large-scale production. When the factors of production are small in quantity, the scale of production is said to be small.

The instances of large-scale production in our country are the cotton textile mills, sugar mills, iron and steel companies, railways and other big undertakings. The examples of small-scale production are the village weavers, *khandsaris*, blacksmiths' work-shops and bullock carts. In all the countries of the world large-scale production and small-scale production exist side by side, though the former is making progress steadily at the cost of the latter. In India large-scale production is making slow but certain progress.

It is natural to enquire into the causes of increase in the scale of production. These causes are the advantages and economies which large-scale production brings about.

#### § 1. ADVANTAGES OF LARGE-SCALE PRODUCTION

Large-scale production is more economical than small-scale production. In other words, the cost of production per unit is generally less when the scale of production is large than when it is small. This is the result of the various economies which are made available when the scale is large and which do not arise when the scale is small. Such economies can be divided into two classes : (1) external economies, and (2) internal economies.

##### 1. External Economies

Economies which result due to some external factors operat-



ing from without and have no relation to the internal organisation of production are known as external economies. External economies are enjoyed by all the firms in the same industry in common. Development of means of transport and communication, facilities in advertisement, advantageous localisation of industries and such other privileges can be included under it. When the scale of production is large the sources of external economies grow up in plenty and external economies appear as a consequence.

## 2. Internal Economies

Internal economies result from the efficiency of the internal organisation of a particular firm which enjoys them exclusively. They have relation to the administrative, technical and commercial spheres of business. There are three classes in which the expenses of a factory can be divided and in respect of which economies are made. These are : (1) preparatory expenses, (2) manufacturing expenses, and (3) distributory expenses.<sup>1</sup> They have been detailed out in the following table :

Heads of Expenditure	Economies
1. Preparatory ..	In the purchase of raw materials, fuel machines and tools and transport services.
2. Manufacturing Expenses ..	(a) In the engine room. (b) In the workshop. (c) In the utilisation of by-products. (d) In the packing department. (e) In the office.
3. Distributory Expenses ..	(a) In transport. (b) In agents, travellers and advertisements, and (c) Through reduction in fluctuations in demand.

(1) *Preparatory Expenses.* Before actual manufacturing can begin, a producer has to make certain preparations. Large quantities of raw materials and tools are required. All these things can be purchased at cheap wholesale rates if the scale of production is large and the demand for them is enormous. Economies can thus be effected. Again, all these things have to be transported to the factory from different places. This can also be arranged at low rates if consignments are large since railway and steamship companies quote lower rates for them.

<sup>1</sup> Penson, *The Economics of Everybody Life*.



(2) *Manufacturing Expenses.* After the acquisition of all the preliminary things required in production, the actual work of manufacturing begins. If the scale of production is large, substantial economies can be made in the various departments of the manufacturing business.

(a) *Engine Room.* We shall begin our survey with the engine room where motive power is generated. The larger the quantity of power required, the less is the cost per unit of power. If you double the amount of the power generated, you need not exactly double the engine or the space or the engineers. In such case a more powerful engine will certainly be required and the consumption of fuel will also go up, but the increase in expenses will be much less in proportion to the amount of power generated. Consequently economies can be effected in the supply of motive power if the scale of production is large.

(b) *Workshop.* There is a great scope for economies in the actual workshop, which can be attained by increasing the scale of production. If the scale of production is large, the number of labourers employed will also be great, with the result that a thorough and minute division of labour can be introduced. Division of labour brings about a large number of economies, which have already been discussed. Not only labour, machinery can also be specialised. A big factory can afford to purchase costly machinery, each made for one small use, and can thus take advantage of the economies resulting from the specialisation of machinery. Huge steam hammers, cranes, hydraulic riveting machines which increase output enormously at low cost, can be used only by the big companies of today. Again, if the scale is large, machinery may be used for longer hours per day and kept more fully employed as compared to small business where their use may be shorter and occasional. A large firm also has the advantage of using most up-to-date machinery. New inventions are being made with such rapidity that a machine becomes outofdate or 'obsolete' very soon. In a big business the machinery, being used day and night, is soon reduced to scrap : loss due to obsolescence is thus saved and the latest types of machinery can be purchased immediately after their introduction. Economies can be made even in repairing machines, for a large business, where repairing work has to be done regularly, can afford to employ mechanics and carpenters for this purpose and save the profits which are made by repairing workshops. Finally, a large undertaking can spend money on researches and experiments, which is not possible in the case of a small enterprise. Work of this nature leads to an improvement in the processes of production, better utilisation of raw materials, introduction of new designs and patterns and the derivation of the advantages of scientific progress in so far as it affects organisation.

(c) *By-products.* Now we come to the problem of the utilisation of by-products. Every factory has certain by-products or waste products which it throws away and which if properly used, can be a source of profit. The utilisation of by-products requires special skill, experiments and capital, all of which are available in the case of large-scale production and not in the case of small-scale production. Waste



products, which ordinarily involve some expense in removal, become a source of profit in big factories. Thus in the great slaughter houses of U. S. A, no part of animal is wasted ; waste products are employed to yield several useful by-products like tallow, fertilizers, glue and gelatine, all of which find ready market.

(d) *Packing Department.* The next important department is the packing department. If a concern is large, it can have its own packing department and can thus save the profits which formerly went to the pockets of outside packers. It can even employ packing machines and effect further economies. Similar economies can be effected in the printing of wrappers, labels and cards.

(e) *Office.* Economies can also be made in the office where the clerical work is done. If the work is large, clerks can become specialised. Clerks of exceptional intelligence may be given really responsible and skilled work, the less intelligent clerks being given such mechanical work as adding and subtracting. The work of the latter type may even be allotted to special machines designed for the purpose.

(3) *Distributory Expenses.* The expenses incurred in the marketing of the produce are known as distributory expenses. In their journey from the factory to the consumers, the goods pass through various groups of persons, each of which puts a charge to their cost price by way of its reward. If the operations of the factory are carried on on a large scale, many economies can be made in the distributory expenses.

(a) *Transport.* Let us first take the cost of transport of the finished products from the factories to the markets. If the scale of production is large, the consignments will also be large for which railways and steamship companies quote specially low rates. If the goods to be sent to a certain place happen to be enormous in quantity, the producer can very well have his own railway trucks which can be loaded up in the factories and drawn by his own engine to the nearest railway siding and attached to the train.

(b) *Agents, Travellers, etc.* Similar economies are made in the cost of agents, travellers and advertisements, in the case of large production. "The advertising appropriations of large organisations reach almost stupendous figures, while their sales are promoted by numerous travellers and sales agencies in every part of the world. Small-scale enterprise does not provide a sufficient margin to justify such expenditure nor is there usually sufficient capital at its disposal to make possible such outlay".

(c) *Reduction in Fluctuations in Demand.* A large concern is also not subject to the influences of fluctuation in the market demand to any great extent. A large undertaking employs very experienced and able men whose forecasts about the future of the market are remarkably correct. The head of a large firm leaves the work of superintendence and general organisation to his subordinates and devotes himself exclusively to the trade problem. Marshall aptly writes : "The head of large business can reserve all his strength for broadest and most fundamental



problems of his trade. He must, indeed, assure himself that his managers, clerks and foremen are the right men for their work and are doing their work well, but beyond this he need not trouble himself about details. He can keep his mind fresh and clear for thinking out the most difficult and vital problems of his business ; for studying the broader movements of the markets, the yet undeveloped results of current events at home and abroad ; and for contriving how to improve the organisation of the internal and external relations of his business”.

## § 2. DISADVANTAGES OF LARGE-SCALE PRODUCTION

Though large-scale production has a large number of advantages, it is not free from disadvantages.

(1) If demand is miscalculated and production exceeds the market demand, great loss is incurred.

(2) The relations between employers and employees do not remain very close; hence they often come into clash with each other. Organised strikes and lockouts often stop the smooth functioning of the productive mechanism.

(3) Then there are certain lines of production which cannot be carried on satisfactorily on a large scale ; for instance, *bidi* making or embroidery is specially suited for small-scale production.

## § 3. LIMITS OF LARGE-SCALE PRODUCTION

The extent to which the economies of large-scale production can be realised depends upon the largeness of the scale of production. It may be generally said that the larger the scale of production, the more will be the economies realised and the less will be the cost per unit. But there is a stage beyond which the scale of production cannot be increased with advantage. In other words, there are certain limits beyond which the largeness of the scale of production becomes uneconomic. These limits are imposed by the nature of the business, by the nature of the market and by the nature of organisation. We shall deal with these three limitations below.

(1) *The Nature of the Business.* In some cases the nature of the business carried on is such that large-scale production is altogether unsuited for it. Business of this nature can be carried on profitably only on small scale.

(a) Some trades require special personal skill from workers who cannot be replaced by automatic machines. Silk weaving, embroidery work and other delicate works are the examples of such business. They must be carried on a small scale.

(b) Those businesses where the personal taste of the consumer is cared for, the scale of production has to be small. A good example of this is the tailor's business. A tailor has to meet the wishes and requirements of each individual customer. Its success depends upon the individual care and satisfaction that he gives. If he increases his business, he may find that he cannot pay adequate attention to each and every customer, with the result that some of them may withhold their custom.



(c) Some businesses where personal attention of the head is required, are generally small-scale businesses. For instance, very fine cotton fabrics are produced not in big cotton mills of Bombay where personal supervision is difficult, but in small mills of Ahmedabad and Sholapur.

(2) *The Nature of the Market.* The limit to large-scale production is sometimes imposed by the nature of the markets—its extent and stability.

Large-scale production turns out enormous quantities of goods which must have very large markets for sale. Large markets, therefore, are absolutely essential for large-scale production. If the market for a producer is small, nobody will commit the blunder of producing it on a large scale, for in such a case the goods produced will not all be sold always. For instance, the Bombay cotton mills produce cotton goods on a very large scale simply because there is a very great market for these goods; but the vegetable growers roundabout Bombay produce vegetables only in small fields adjacent to the city because the market for vegetables is limited in respect of locality, customers and time—vegetables can be sold only in Bombay, to the people who make their purchase in that city, and the very day they are brought from the fields they begin to rot.

Besides the extent of the market, its stability is also an important consideration. If the demand for an article is not constant but uncertain, in other words, if it is quite large at one time but very small at another, it will be a mistake to start big factories for its production.

(3) *The Nature of the Organisation.* A limit to the largeness of the scale of production is also imposed by the efficiency of organisation. This is the most important limitation of large-scale production. Organising ability of a man being limited, there is only a particular scale of business which he can efficiently organise; if the scale of business is increased beyond this limit, the efficiency of the organiser diminishes and the production becomes uneconomic.

#### § 4. SMALL-SCALE PRODUCTION

When production is carried on with small quantities of the various factors of production the scale of production is said to be small. In modern days, production has a tendency of being instituted on a large scale; but still, small-scale production persists with great vigour.

The causes of the persistence of small-scale production are to be found in (i) the nature of certain occupations to which small scale is best suited; and (ii) the advantages of small scale.

(i) The following are the cases in which small scale is invariably adopted:

(a) The occupations requiring personal attention and care like tailoring are mostly conducted on small scale.

(b) The products which require high artistic excellence are produced by handicraftsmen who produce them on small scale.



(c) Some products do not command a wide market, and must be produced on small scale.

(d) Some occupations by their very nature cannot be conducted on a large scale. Agriculture is an example. It is true that we often hear of big mechanized farms but they are not big as compared with mammoth factories. *Bidis* are made by hand and *bidi*-making has, therefore, to be a small-scale enterprise.

(e) Industries in the experimental stage have to be run on small scale.

(f) Handicraftsmen, who want to remain independent, work on a small scale.

(ii) The following are the advantages of small-scale production. Firstly, the master can keep a close watch everywhere. His foremen or workmen cannot afford to shirk the duty. Secondly, he saves much of the book-keeping and the elaborate system of checks which are essential in the case of large establishment. Thirdly, the relations between the master and his servants are very intimate and cordial; and there is rarely any occasion for strikes or lock-outs.

The chief disadvantage of small-scale production is that it cannot take advantage of the various economies which are available in the case of large-scale production. Moreover, difficulty is faced if the commodity of a standard type has to be produced in bulk. In other words, it is unsuited for mass production.

However, the disadvantages of small-scale production have been appreciably reduced by a number of factors. Firstly, the small-scale producer shares the advantages of external economies which are constantly increasing in importance. Secondly, the advantages of research, new modes of production, etc., which were so far available to big producers only are now available to small producers as well. In all matters respecting trade knowledge, newspapers and trade and technical publications of all kinds are perpetually scouting for him and bringing him much of the knowledge he wants. Finally, small machinery have been invented for the benefit of small-scale production which can be operated by electricity. They have greatly improved the lot of the artisan and granted him a fresh lease of life.

### INTERMEDIATE QUESTIONS

1. Discuss the distinction between External and Internal Economies of a business. (Bombay, I. A., 1940).

2. Explain the economies of large-scale production. How far is it possible for large-scale and small-scale production to exist side by side? (Bombay, I. Com., 1939).

3. Write a note on Internal and External Economics. (M. B., I. A., 1953).

4. What is meant by large-scale production? Carefully examine the obstacles to the growth of large-scale production in this country. (M. B., I. A., 1952).

5. Describe the merits and defects of the system of large-scale production. Indicate its limitations. (M. B., I. Com., 1952).



6. What are the advantages of large-scale production ? Account for the persistence of small-scale production with special reference to India. (Poona I. A., 1949).
7. Explain the economics, internal and external, of large-scale production. (Punjab, Inter., 1951).
8. Write a note on External and Internal Economics. (Raj., I. A., 1953).
9. Compare the advantages of large-scale farming and small-scale farming ? Which of the two do you consider suitable in the case of India ? (Raj., I. A., 1952).
10. What are the limitations of large-scale production ? Illustrate your answer with reference to agriculture. (Raj., I. A., 1943).
11. What are the advantages and limitations of large-scale production (Raj., I. Com., 1948).
12. How does agriculture come to be carried on all the world over generally on a small scale ? (Raj., I. Com., 1945).
13. Discuss the advantages of large-scale production. (Utkal, I. A., 1951 S).

## FORMS OF BUSINESS ORGANISATION

When an individual enters into business, either actively or as an investor in a business enterprise managed by someone else, he is perhaps as much interested in the form of organisation as in any other feature of the business. This is not surprising for the form of the organisation determines largely what share of the profits the individual may obtain for himself, how much control he can have over the business and how much risk he assumes.—*Gerstenberg*.

If we look to the business establishments all around us, we will find that they have been organised in different forms. Some are owned and managed by one individual ; some are partnership firms ; others are joint stock companies ; while still others are co-operative societies. It is important to discuss the nature and salient features of all these forms of business organisations. Keen observation will reveal that because of the increasing popularity of large-scale production, one-man enterprise is losing its importance, partnership is less frequent than before, while the joint stock company has become the most typical and the most widespread form of business organisation.<sup>1</sup>

## § 1. THE SOLE TRADER

When a business establishment is owned and managed by a single individual, he is known as the sole trader or the individual entrepreneur. If the business yields profits, he alone is entitled to all the earnings ; if it shows a loss, he alone has to bear it. He is also the sole manager, the pivot as it were, of the entire business.

Individual entrepreneur system is the earliest and the simplest form of business organisation. Even today it is very common and widespread. Its importance is, however, declining due to a general increase in the scale of production all around. It still persists in such businesses as retail trade and agriculture, and in professions like that of doctors and lawyers. In the business in which personal relationship between the consumer and the producer is important, the individual entrepreneur system is very appropriate.

This system has several advantages. Its formation is easy ; anybody who intends to set up a business establishment is at liberty to do so with the resources at his command. The motive to work hard in the business is also great ; because hard work increases profits and these profits go directly and exclusively to the pocket of the sole trader. Moreover, this system ensures prompt action, so often necessary for success of the business, since the sole trader does not necessarily have to consult anybody in his business matters.

This system is not free from disadvantages. The greatest disadvantage is that the liability of the sole trader is unlimited ; in

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<sup>1</sup> For greater details see my *Business Methods and Machinery*, Vol. II. Kitab Mahal.



other words, his debts run against his entire property and not merely against the amount of capital employed in his business. Secondly, the size of the business, under this system necessarily remains small for the productive resources which a single individual can supply are definitely limited. Again, a sole trader does not command specialised and expert opinion which is possible under partnership, and more under the joint stock company, because of large resources of the latter.

## § 2. PARTNERSHIP

The need of doing work on a larger scale than is possible under the previous system draws together more than one person to carry on business in partnership. Such a business establishment is called a partnership firm. The Indian Partnership Act 1932 lays down : "Partnership is the relation between persons who have agreed to share the profits of a business carried on by all or any of them acting for all." The maximum number of members is 20 in the case of an ordinary firm and 10 in the case of a banking firm. The liability of partners is usually unlimited, as is the case with sole proprietor, though some of the partners may have limited liability by express agreement. Partners are jointly and severally (separately) responsible for all the debts of the firm.

Partnership as a form of business organisation, is not so important now as it was some time back. It still persists in retail trade and mercantile establishments of moderate size. Small manufacturing factories are also sometimes organized on partnership basis.

Partnership has many advantages. It can be formed very easily, though the ease of formation is not so great as under the individual entrepreneur system. Motive to labour hard to make the business a success is quite considerable. "So great is the risk arising from unlimited liability, so direct is the relation between the partners, that the stimulus to production operates powerfully". Again, since the resources of more than one person are available here, the scale of production becomes fairly large. The capital, skill and business ability at the command of a partnership firm are often greater than those available to a sole trader. The combination of partners and their resources also makes differentiation, specialisation and division of labour possible.

Partnership has certain defects as well. Though the capital at the disposal of the firm is large as compared to a sole trader, it is not large enough for starting big factories and big transport agencies which typify the modern size of business establishments. The unlimited liability is also a great handicap; for that makes the liability of each partner excessive for most purposes. Again, partnership has a very precarious existence and may dissolve at any time. Personal quarrel or lunacy or death or insolvency of a partner, may lead to the break-up of the firm.

## § 3. JOINT STOCK COMPANIES

The necessity of extending the scale of business still further leads to the co-operation of a larger number of persons than is the



case under partnership. An association of individuals of this character, formed for carrying on business for their private gain, is known as a 'joint stock company'. It has been provided in the Indian Companies Act that an association consisting of more than 10 persons formed for the purpose of carrying on a banking business and any association consisting of more than twenty persons formed for the purpose of carrying on any other business, is to be known as joint stock company.

### Characteristics of a Company

The joint stock company has some outstanding characteristics. Firstly, capital of such a company is divided into stocks and shares. The *stock* is owned *jointly* by a large number of persons. That is why it is called a joint stock company.

Secondly, the shares of a company are transferable. The man possessing a share of the Tata Iron and Steel Company, Ltd., or of the Allahabad Bank, Ltd., may sell it to any other person if he so desires.

Thirdly, the liability of the members is limited to the face value of the shares. If the value of the share purchased by a person is Rs 100, the maximum amount that he can be called upon to pay in all is Rs. 100. It is to impress this fact that the word "Limited" is added after the name of joint stock company, e. g., the New Theatres, Ltd., the Bombay Talkies, Ltd.

### Capital of a Company

The capital of a company is of different kinds which need description. The total capital which a company can raise by issuing shares is called its *Authorised Capital*. Usually a part of the authorised capital is offered to the public for subscription; the rest is issued later as and when more capital is required. The part of the authorised capital which is issued to the public for subscription is known as *Issued Capital*. The part of the issued capital which is actually subscribed by the public is known as the *Subscribed Capital*. Shareholders are sometimes called upon to pay the full value of the shares and at others only part of it. The part of the issued capital which the shareholders are called upon to pay is known as the *Called-up Capital* (the uncalled portion being named as the *Uncalled Capital*). The part of the called-up capital which is actually paid up by the shareholders (some of them often fail to pay their commitments) is known as *Paid-up Capital*.

### Management

The capital of a company is divided into a large number of shares. A man purchasing a share becomes a member or one of the proprietors of the company. The number of the proprietors of a company is usually very large. If all of them want to take part in its management, it will really result in mismanagement. Management can best be done by a few chosen persons suited to the task. As such, the shareholders usually elect a few persons from among themselves to direct the general policy of the company, which is often formulated by the shareholders at one of the general meetings. They are called directors, and collectively, the board of directors. The actual work



of management and administration is delegated to the manager. Sometimes a director is made a manager, when he is known as managing director.

### **Advantages and Disadvantages**

A joint stock company has a large number of advantages. It is the joint stock form of business organisation which makes possible the accumulation of capital on tremendous scale. Even ordinary people do not mind purchasing a few shares of a company when they know that they can do so without exposing themselves to the risk of unlimited liability and that if they are dissatisfied with the functioning of the concern or if they are in need of money, they can easily sell off their shares to somebody else. It is due to the principles of limited liability and transferability of shares that we have today such large concerns as Tata Iron and Steel Works, Suez Canal, hydro-electric companies and big transport systems. Moreover, a company is in a position to take advantage of rare skill, unusual liability and expert opinion, for its resources are really vast. Since a company employs a large number of labourers, experts and technicians, division of labour can be introduced to a fairly large extent. A company again, has a very long life because a dissatisfied shareholder may go out by selling his shares; the concern need not dissolve if one of its members becomes dissatisfied or dies or becomes lunatic or goes insolvent.

We shall now discuss the disadvantages of a joint stock company. Firstly, it is difficult to form a company for many legal formalities have to be undergone. Secondly, motive to hard work is often weak. Thirdly, prompt action in business matters cannot be taken since there are so many persons to be consulted and to be brought to agree to a certain policy or action. Again, the management is indirect and delegated and there is likelihood of waste or inefficiency. Moreover, in a company enterprise is separated from organisation; shareholders who are the entrepreneurs are not the managers of the business. This separation sometimes leads to a lack of identity of the interest of the company with the interest of its management, resulting in such practices as manipulation and speculation and ultimate ruin. But all these disadvantages do not set off the important advantages of joint stock companies. Indeed much of the economic, commercial and industrial progress of today is the gift of the joint stock company form of business organisation.

### **§ 4. COMBINATIONS**

In these days of large-scale production and keen competition, business units sometimes combine together and form what is called a combination or a combine. Combines are formed to take advantage of the economies of large-scale production or to put an end to the keen competition between the competitive business units. Combinations take various shapes and are known by different names like holding companies, syndicates, cartels and trusts. These combinations lead to monopoly, that is, the sole power of controlling the market.



the *willingness* and the *ability* to offer for it some money or things or to undergo some exertion.

### Demand and Price

Demand is always made by a buyer, or would-be buyer, for a certain article. The demand for a commodity is closely related to its price. The willingness of people to buy a thing depends, to a considerable extent, upon what they have to pay for it. Therefore, there is no such thing as demand apart from price.<sup>2</sup> Because of this intimate relationship between demand and price, demand is also defined as *the quantity of a commodity which a person is willing to buy at a certain price*<sup>3</sup>. Thus when it is said that the demand for wheat has increased, it means that more wheat is now demanded at a given price. This definition is very widely popular amongst economists.

### Demand Price

By demand price is meant the price at which a purchaser is willing to purchase a certain quantity of a commodity. If you are willing to buy five fountain pens for Rs. 2 each, your demand price is Rs. 2 per fountain pen.

### The Law of Demand

The law of diminishing utility tells us that as the stock of a thing increases, its marginal utility, other things remaining the same,

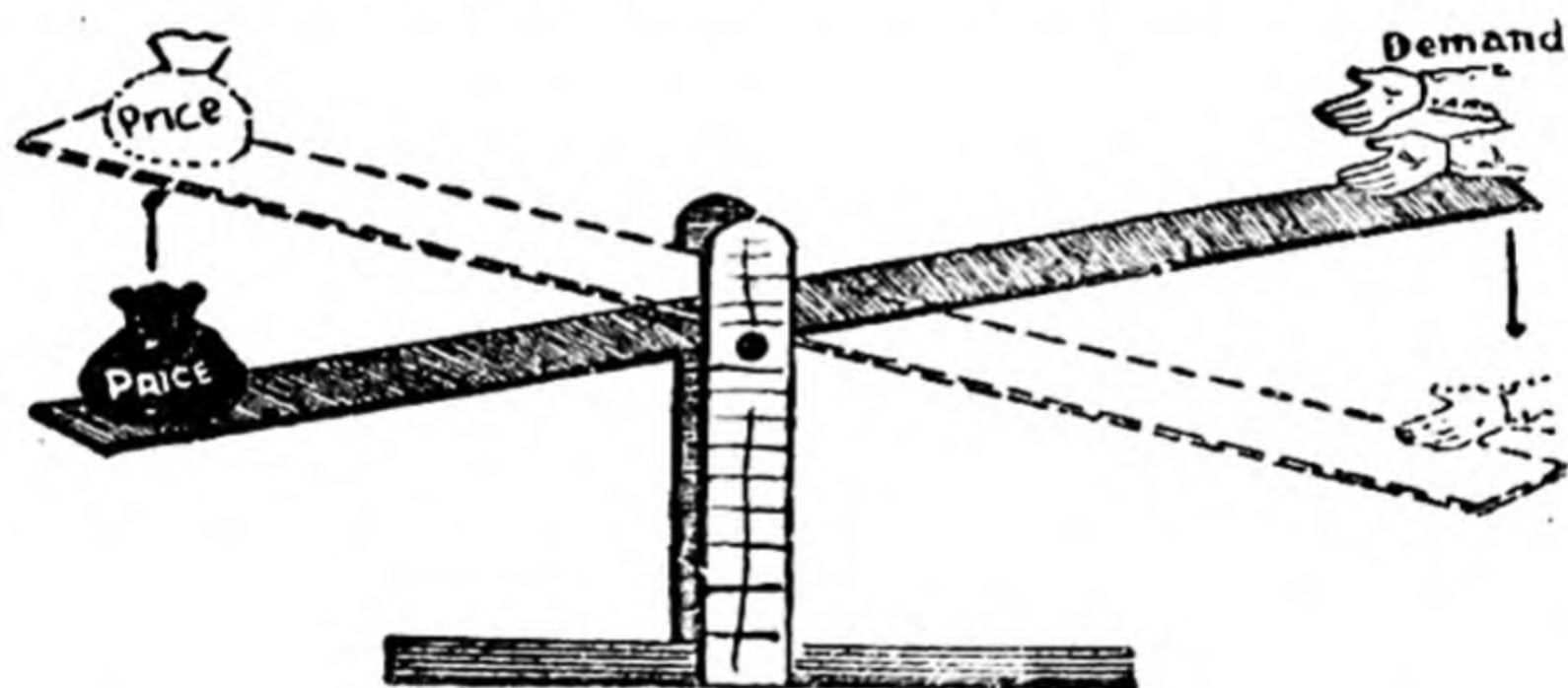


Fig. 25

decreases. We also know that the price which a person is willing to offer for a commodity is equal to its marginal utility to him. Therefore, as the quantity offered for sale increases and its marginal utility decreases, the price which a buyer is willing to pay for its successive units goes down. In the words of Marshall, "The greater the amount to be sold, the smaller must be the price of which it is offered in order that it may find purchaser; or, in other words, *the amount demanded increases with a fall in price, and diminishes with a rise in price.*"<sup>4</sup> Demand

<sup>2</sup> Penson, *Op. Cit.*, Part I, p. 107.

<sup>3</sup> J. S. Mill says that we must mean by the word demand, the quantity demanded and remember that this is not a fixed quantity, but in general varies according to value. See his *Principles of Political Economy*, III. ii. 4.

<sup>4</sup> Marshall, *Principles of Economics*, p. 99.



and price are as such indirectly related. This is called the *Law of Demand*. Demand and price are like the two ends of a seesaw; when the one end goes down, the other one goes up; and *vice versa*. The diagram given on p. 261 illustrates the point quite clearly.

It should be clearly understood that the law of demand is silent regarding *the extent of change* in demand as a result of a certain change in price. If the price changes by 10% the demand may change by 5% only or by 95%. The law of demand is silent on the point. It simply affirms that a rise in price would *tend* to reduce demand and a fall in price would *tend* to increase demand.

### Demand Schedule

✓ To obtain complete knowledge of a person's demand for anything at a particular place and time, we have to ascertain how much of it he would be willing to purchase at each of the prices at which it is likely to be offered. A list or schedule showing the amount of the commodity which a person will demand at various prices may be prepared. Such a list or schedule is called *Demand Schedule*. A demand schedule may be defined as *a list showing the relationship between different quantities of a commodity and their respective demand prices at a particular place and time*.

*Individual and Market Demand Schedule.* A Demand Schedule may refer to the demand of an individual or to that of a market. In the latter case, it refers to collective demand of all the individuals constituting the market. This is arrived at by adding the demand of all the individuals constituting the market. The former is known as an *Individual Demand Schedule* and the latter as *Market Demand Schedule*.

The following is the Demand Schedule of a student for pencils at Allahabad on June 1, 1956, at 8 A. M. :—

#### Demand Schedule

PRICE	DEMAND
6 "	4
5 "	6
4 "	6
3 "	9
2 "	12
1 "	18

The demand schedule agrees with the law of demand. As price falls, demand increases. When the price is 6 pice per pencil, only 3 pencils are demanded. But when the price falls to 4 pice per pencil, 6 pencils are demanded; and at 1 pice per pencil, 18 pencils are in demand.

Demand schedules are of great use in economics. They greatly aid in the understanding of the law of demand and exhibit the elasticity of demand very vividly.

### Demand Curve

The demand schedule can be represented on a graph paper.

Such a graphic representation of a demand schedule is called the *Demand Curve*. It reports the number of units that would be bought at different prices. The demand schedule given above is diagrammatically represented below :

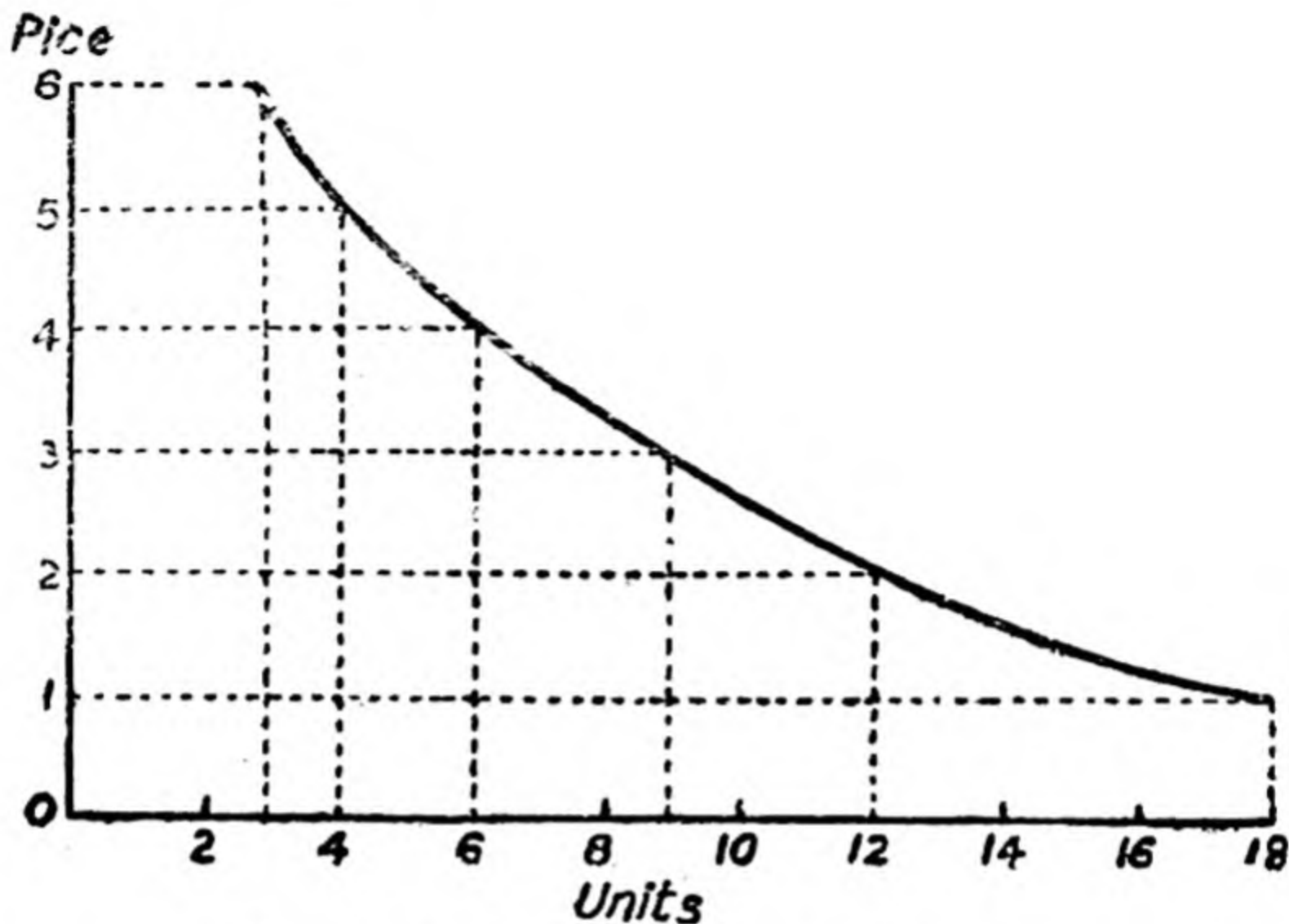


Fig. 26—Showing the Demand Curve.

Units of pencil have been measured along OX axis and price is shown along OY axis. Points have been plotted by dotted lines. By joining the points, we get the demand curve drawn in thick black ink.

## § 2. ELASTICITY OF DEMAND

### Meaning of Elasticity of Demand

The demand for a commodity diminishes or increases according as price increases or decreases, other things remaining the same. This variation in demand, in response to a variation in price, may be slow or rapid. *The variation in demand in response to variation in price is called the Elasticity of Demand.*

By the common experience of all merchants, when the prices of certain goods are lowered even slightly, there is an appreciable increase in the quantity demanded; and when the prices of these commodities go up slightly, there is a marked decrease in the demand. In the case of other goods, like salt, the amount demanded is little affected by the fluctuation in price. "The elasticity (or responsiveness) of demand..... is great or small according as the amount demanded increases much or little for a given fall in price, and diminishes much or little for a given rise in price". (Marshall)

### Degrees of Elasticity of Demand

The demand for an article may be (i) elastic, (ii) highly elastic, (iii) perfectly elastic, (iv) moderately elastic or inelastic, or (v) per-



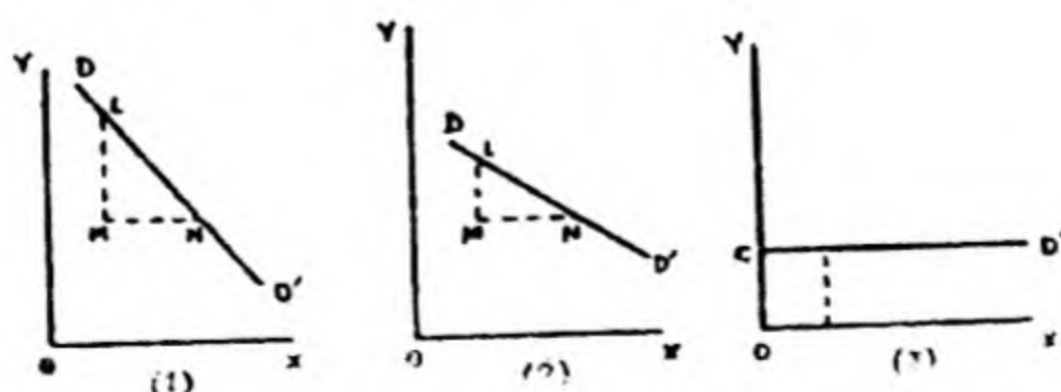
fectly inelastic. These are the five degrees of the elasticity of demand.

(i) *Elastic*. There are some articles of comfort whose demand varies in *exact proportion* to the variations in price. If their price becomes double, the demand for them falls by half; and if their price falls by half, the demand for them becomes double. Demand in such cases is said to be elastic. The demand curve of this type is semi-horizontal or semi-vertical as is shown in fig. 27 (1) appearing on the next page.

(ii) *Highly Elastic*. Take the case of a good silk shirting cloth, which is being sold at Rs. 4 per yard. If the price suddenly drops down to Rs. 3 per yard, you may like to purchase it for two shirts rather than for one only. In this case the amount demanded increases considerably for a small fall in price; price falls by 25 per cent but the demand increases by 100%, i.e., increase in demand is more than proportionate to the rise in price. Similarly, if the price of the cloth rises by a small amount, the demand will fall considerably, i.e., more than proportionately. *When the variation in demand is more than proportionate to the variation in price, the demand is said to be highly elastic.* The demand for articles of luxury is of this nature. The demand curve of this type is horizontal; it tends to be somewhat parallel to the base. See fig. 27 (2) on the next page.

(iii) *Perfectly Elastic*. Cases are imaginable in which the demand for an article is perfectly elastic, i.e., the demand varies considerably without any variation in price. The price may remain the same, but the demand may still increase tremendously or fall considerably. Such cases are only hypothetical and not real. The demand curve in this case would be perfectly parallel to the base line. See fig. 27 (3) given below.

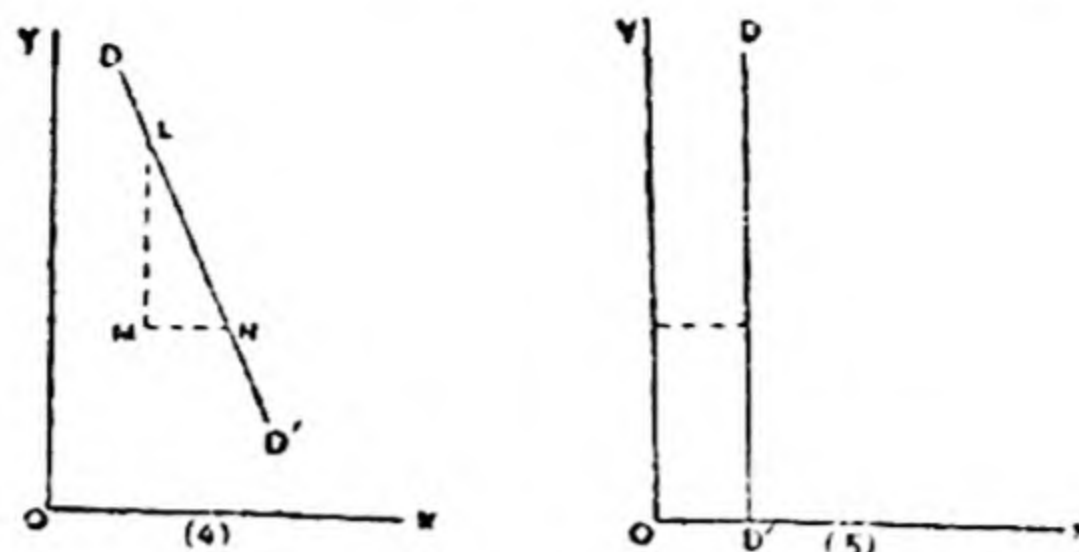
(iv) *Inelastic*. Take, again, the case of salt. Salt is indispensable for us and our demand for it remains, more or less, the same irrespective of fluctuations in its price. Suppose its price today is one anna per seer. If tomorrow the price rises by two annas seer, our demand for it will probably not decrease appreciably. In other words, the fall in demand is less than proportionate to the rise in price. Similarly, the fall in price will cause less than proportionate rise in demand. The demand in this case has hardly any elasticity; it is, in fact, *inelastic*. *When the variation in demand is less than proportionate to variation in price, the demand is said to be inelastic.* The demand for articles of necessity is of this nature. The demand curve in such cases tends to be vertical. See fig. 27 on p. 265.



Elastic Demand Curve

Highly Elastic Demand Curve

Perfectly Elastic Demand Curve



Inelastic Demand Curve

Perfectly Inelastic Demand Curve

Fig. 27. Diagrams illustrating elasticity of demand.

(v) *Perfectly Inelastic*. The demand is said to be perfectly inelastic when there is absolutely no change in demand as a result of variation in price. The demand remains the same irrespective of the price. This is, like perfectly elastic demand, a purely imaginary case. This curve is perfectly vertical—it is exactly parallel to the OY axis. See Fig. 27 (5) above.

In the above diagrams, OX axis measures quantity of commodities and OY axis the price thereof. LM dotted line shows the change in price and MN dotted line, the change in demand as a consequence. The reader should observe that the greater the tendency towards elasticity, the more horizontal the demand curve; and, conversely, the greater the tendency towards inelasticity, the more vertical the demand curve.

The following diagram further illustrates the various degrees of the elasticity of demand :—

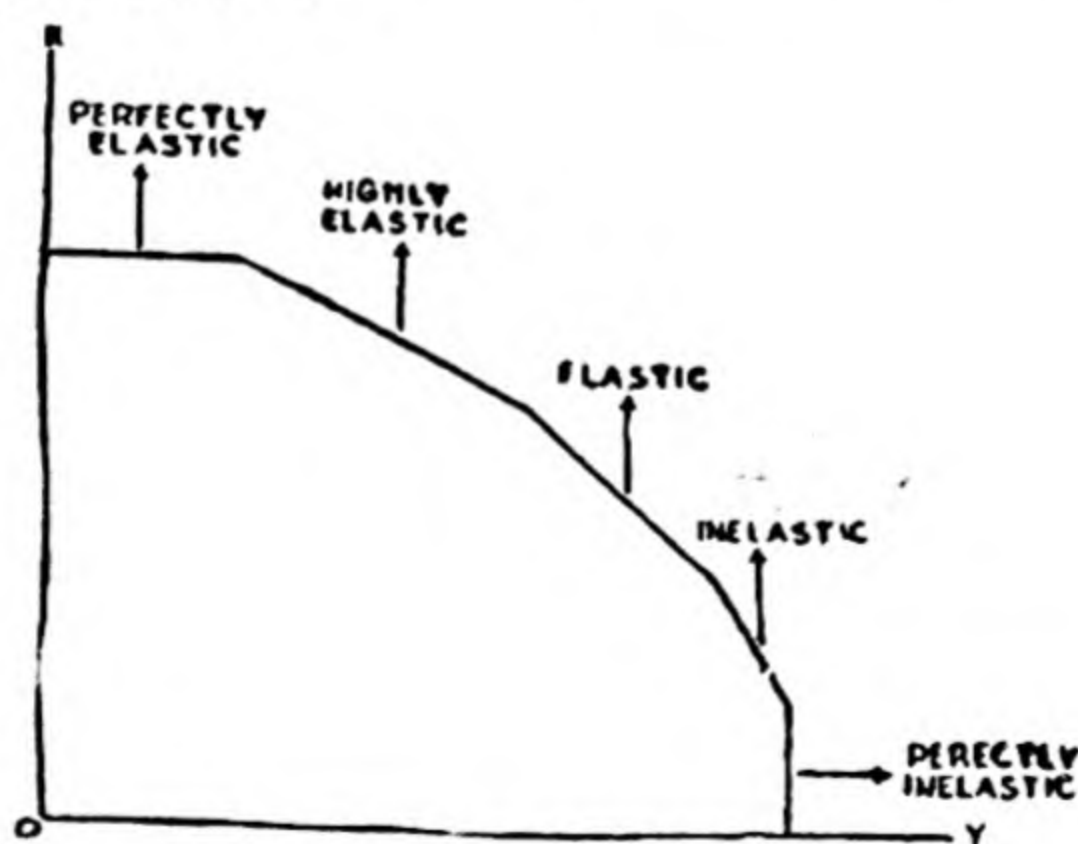


Fig. 28. Another diagram illustrating the various degrees of the elasticity of demand.

### The Measure of the Elasticity of Demand

Economists measure the elasticity of demand ( $e$ ) by assuming one (1) as the unit of elasticity. The elasticity of demand for a com-



modity is said to be one when demand changes proportionately with a change in price. Thus if price becomes double, the demand becomes half ; if price falls by 50 per cent, the demand rises by the same percentage. Here the total amount spent on the article (price per unit  $\times$  the number of units purchased) always remains the same irrespective of price fluctuations. This is the case with articles of comfort. The elasticity of demand for such articles is expressed symbolically as  $e=1$ . When elasticity of demand is equal to one, demand is said to be *elastic*.

The elasticity of demand for a commodity is said to be more than one when the change in demand is more than proportionate to the change in price. Thus if price falls by 10 per cent, the demand may rise by 20 per cent. In this case the total amount spent on the commodity diminishes if the price rises, and increases if the price falls. This is the case with articles of luxury. The elasticity of demand for such articles is expressed symbolically as  $e<1$ . When the elasticity of demand is greater than one, the demand is said to be *highly elastic*.

The elasticity of demand for a commodity is said to be less than one when the change in demand is less than proportionate to the change in price. Thus if price falls by 20 per cent, the demand may rise only by 2 per cent. In this case, the total amount spent on the commodity increases when prices rises, and decreases when price falls. This is the case with necessities. The elasticity of demand for such articles is expressed symbolically as  $e<1$ . When the elasticity of demand is less than one, the demand is said to be *inelastic*.

The following chart tabulates the above discussion in a brief form :

Degree of change in demand	Symbol of elasticity	Articles falling under each	Degree of elasticity
a. Proportionate ..	$e=1$	Articles of comfort	Elasticity
b. More than proportionate	$e>1$	Articles of luxury	High elasticity
c. Less than proportionate	$e<1$	Articles of necessity	Inelasticity

Chart 14. Explaining Elasticity of Demand.

**An Elastic Demand Curve**

The demand for cars is elastic.<sup>5</sup> The following is the Demand

5 The elasticity of demand for cars is fairly small for an individual. However cheap cars may become, nobody will renew his car or cars more than once a year. But it is fairly large for the public as a whole. Every time the price falls, a new stratum of buyers comes up to purchase cars.

Schedule for cars :

*Demand Schedule (for Cars)*

Price Rs.	No. Demanded
10,000	1,000
8,000	3,000
5,000	8,000
4,000	11,000

The resulting curve (see below) gives the typical demand curve for such articles. The curve tends to be horizontal.

In this diagram, units of cars have been measured along OX axis and price along OY axis. Points have been plotted as shown by

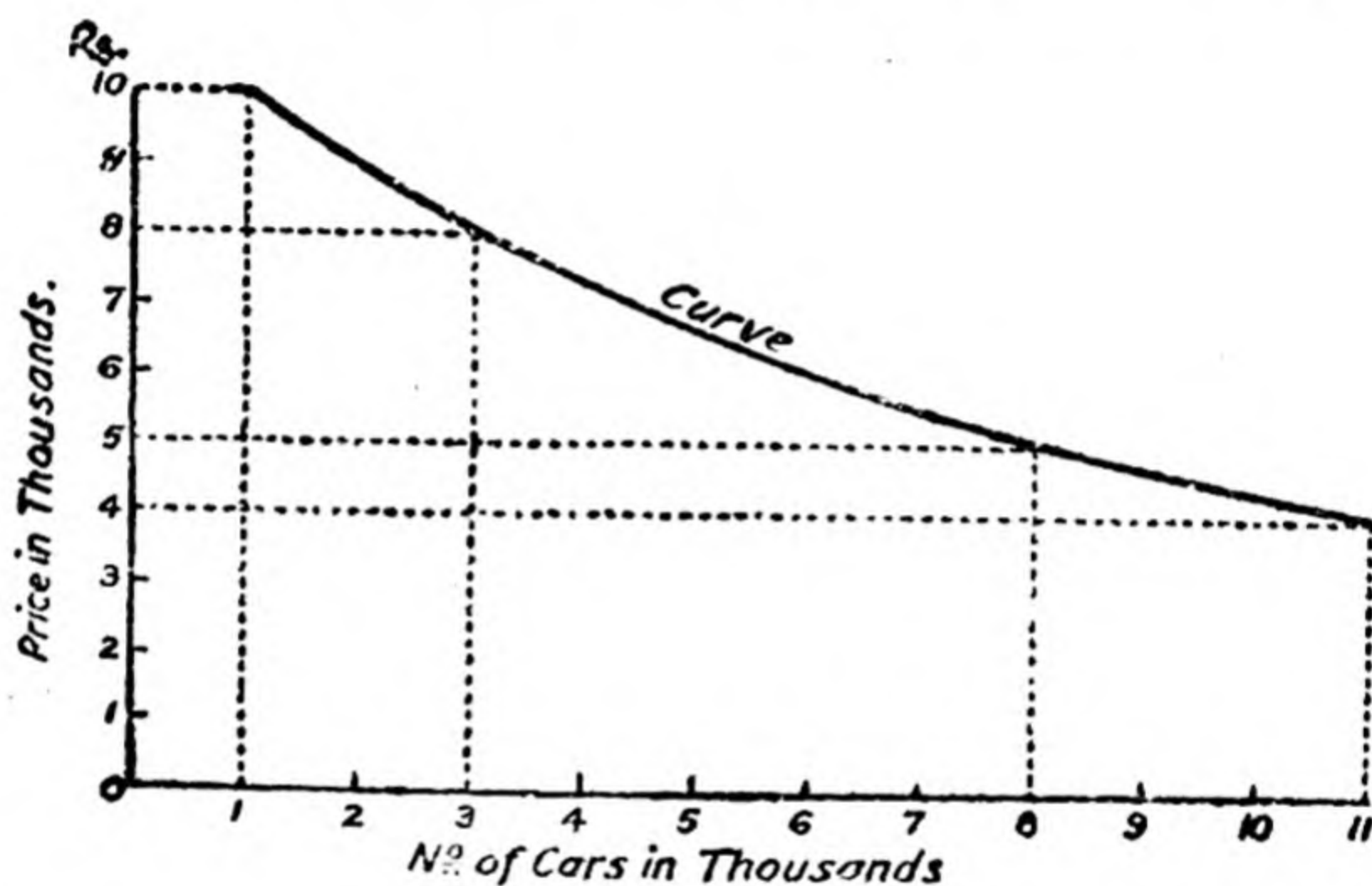


Fig. 29. Showing Elasticity of Demand for Cars.

dotted lines. On joining the points thus plotted, we get the demand curve. The reader should carefully mark the horizontal nature of the curve.

### An Inelastic Demand Curve

Below is given the Demand Schedule for salt. The demand for salt, as said above, is inelastic.

*Demand Schedule (for Salt)*

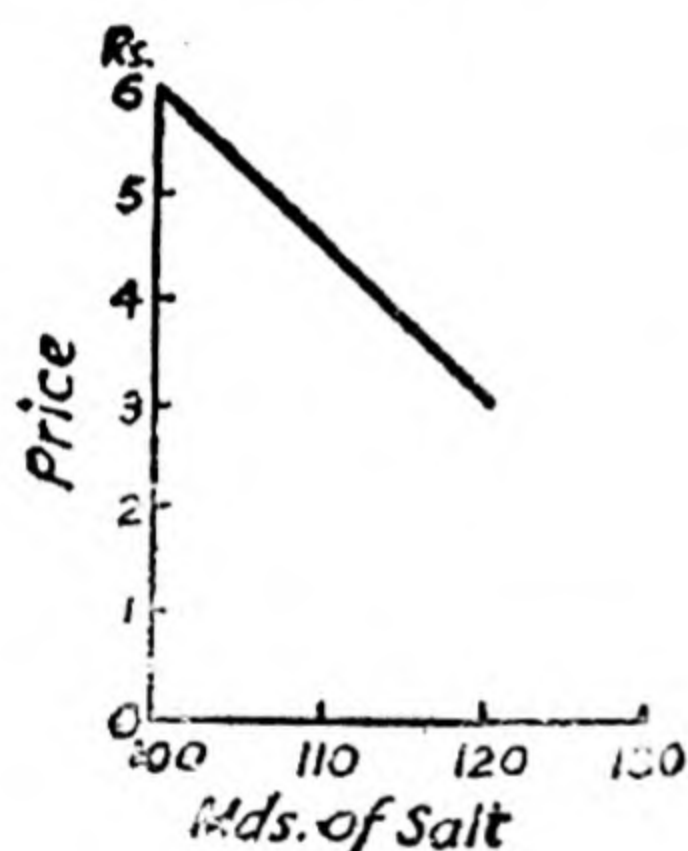
Price (Rs. per maund)	Quantity Demanded (Maunds)
6	100
4	110
3	115
2	120



The resulting curve (Fig. 30) gives the demand curve for salt. The curve tends to be vertical. *The reader should mark the vertical nature of the curve.* It is to be noted that the elastic demand curve tends to be horizontal, while the inelastic demand curve tends to be vertical.

### Conditions Governing Variations in Elasticity

Elasticity of the demand is an extremely variable factor. The elasticity of demand for certain articles like fountain pens and motor cars is more variable than that for certain other articles like salt and match-boxes. Again, the elasticity of demand for the same article



varies according to the economic status of a person. For instance, the demand for motor cars is elastic in the case of a rich man and inelastic in the case of a poor man. The elasticity of demand for neckties is great for a college student but it is hardly any for a cultivator. Again the elasticity of demand for a commodity may be high at certain prices and moderate at certain other prices.

The following are the chief general conditions which determine elasticity of demand for any commodity:

Fig. 30. Showing 'inelasticity of Demand for salt.

(1) *The Demand for Luxuries is Highly Elastic, That for Comforts Elastic and That for Necessaries, Inelastic.* The reason for it is that certain things, which are essential to life, will be obtained at any price ; whereas articles of luxury can be more easily dispensed with ; while articles of comfort rank midway between the two.

The demand for necessities is habitually inelastic. The want for necessities for existence is so pressing and fixed that a man ordinarily demands, more or less, the same quantity irrespective of changes in price. The demand for conventional necessities is also of similar nature. On the death of an elderly member of his family a Hindu is expected to give feast (*Terahi*) irrespective of the price of the victuals. The demand for necessities for efficiency is not always and everywhere equally inelastic. Where standard of living is high they become as insistent as necessities ; but if the standard of living is low, they lose their pressure and are allowed to go unsatisfied.



The demand for articles of luxury is highly elastic. Such articles are not absolutely indispensable so that their consumption is drastically curtailed if prices rise. Their consumption is also capable of enormous extension if prices fall. As such, if their prices rise people begin to demand them in less than proportionate quantities and if their prices go down, their demand increases more than proportionately.

The articles of comfort fall midway between articles of necessity and of luxury ; and the demand for them is *elastic* in the sense that the variation in the demand for them is proportionate to a change in price.

(2) *Influence of Variety of Uses.* Generally speaking, those things have the most elastic demand which are capable of being put to many different uses. For if their prices rise, they can be withdrawn from some uses ; and if they fall, they may be devoted to some new uses. For instance, if water, during a drought, is supplied at a very high rate by metre, people may use it economically and scantily for bathing and washing purposes. But if it is supplied at a fixed annual charge, its use for every purpose is likely to be carried to the full satiety limit.

(3) *The Effect of Substitutes.* The demand for a commodity, which has many substitutes, is more elastic than the demand for a commodity which has no substitutes. For, in the former case, if one of the commodities becomes cheaper than the others, the latter will lose some of their consumers in favour of the former. The expansion of demand for the cheaper commodity will be correspondingly greater than if its only source of increased demand had been the enhanced consumption of the original buyers. Thus coffee is a substitute for tea. If the price of coffee rises appreciably and people take to tea, demand for coffee will fall substantially and that for tea rise considerably. However, if no substitutes are available, as is the case with salt, the demand will not fall considerably as a result of a rise in price.

(4) *Influence of Sensibility and Acquired Tastes and Distastes.* The demand for things also depends upon sensibility: some people care little for refined flavour in their tea provided they can get it as much as they like, while others crave for a high quality but are easily satiated. Constant use also gives rise to acquired tastes and distastes. A man who has become used to writing on fine, glazed paper will continue to demand it irrespective of a rise in its price. Similarly a man, who does not like coffee, will not demand it howsoever low its price may go.

(5) *Influence of Price.* Elasticity of demand is small at very high and very low price ; it is great at medium prices. If the price of a commodity is very high, an ordinary rise or fall in price will not affect the demand for it because then it is bought by the rich alone who will buy it at any price. If the price is very low, everyone can buy who wishes to buy and an additional fall in price does not make any difference in the amount demanded. But at medium price it is consumed by the rich and the upper middle class ; so that if the price rises a little, the latter will give up its consumption and the demand will shrink. On the other hand, if the price falls a little, lower middle class people, and even



the poor, might begin to consume it and the demand may rise. Hence the elasticity is great at medium prices.

*The Case of One Class of Society.* The above statement refers to the demand of the society as a whole. If we consider the demand of a class of people only, we will find that "the elasticity of demand is great for high prices, and great, or at least considerable, for medium prices; but it declines as the price falls; and gradually fades away if the fall goes so far that satiety level is reached". When the price of a thing is very high relatively to any class, any considerable fall in its price causes an increase in the demand for it. When the price drops to the middle level, those members of the class who occupy lower financial position begin to make demand, while the old consumers also increase their demand. The demand rises though not very briskly. Further fall in the price makes the demand increase only half-heartedly since most of it has already been satisfied. At the satiety level demand becomes thoroughly inelastic.

(6) *Proportion of Income Spent.* Finally, the demand is generally more elastic for commodities which take up a large proportion of one's income than for those which only take up a smaller one, simply because one hardly thinks about the very small items. The demand for salt is very inelastic because so little is spent on it as also because there is no substitute for it. Similarly, the demand for sewing cotton is inelastic because the cost of sewing cotton is so small a part of the cost of making clothes that nobody worries much about it.

### § 3. SUPPLY

#### ✓ Meaning of Supply

*Supply is the quantity of a commodity that a seller offers for sale at a certain price.* We cannot think of supply apart from price. Supply depends upon price. High prices increase the supply and low prices reduce it. Hence there is no such thing as supply apart from price.

Just as we distinguished between desire and demand, so we must also distinguish between stock and supply. The stock is the quantity of goods that *could* be sold; the supply is the quantity that *would* be sold at a given price.<sup>7</sup> If in a market at a particular day and at a particular time 2,000 maunds of wheat are offered for sale at Rs. 4 per maund, then 2,000 maunds is the supply of wheat at that price. But there might be a stock of 10,000 maunds of wheat at that time, out of which only 2,000 maunds are being offered for sale.

#### Supply Price

By supply price is meant the price at which a certain quantity of a commodity is offered for sale by its suppliers or sellers.<sup>8</sup>

<sup>6</sup> Marshal, *Principles of Economics*, p. 103.

<sup>7</sup> Penson, *Op. Cit.*, p. 110.

<sup>8</sup> Supply is based on the unwillingness of men to undergo certain dis-commodities which are necessary for production, namely, to labour or to sacrifice.

## The Law of Supply

Supply varies with a change in price. It increases with a rise in price and decreases with a fall in it. Thus both supply and price move together. This is known as the *Law of Supply*.

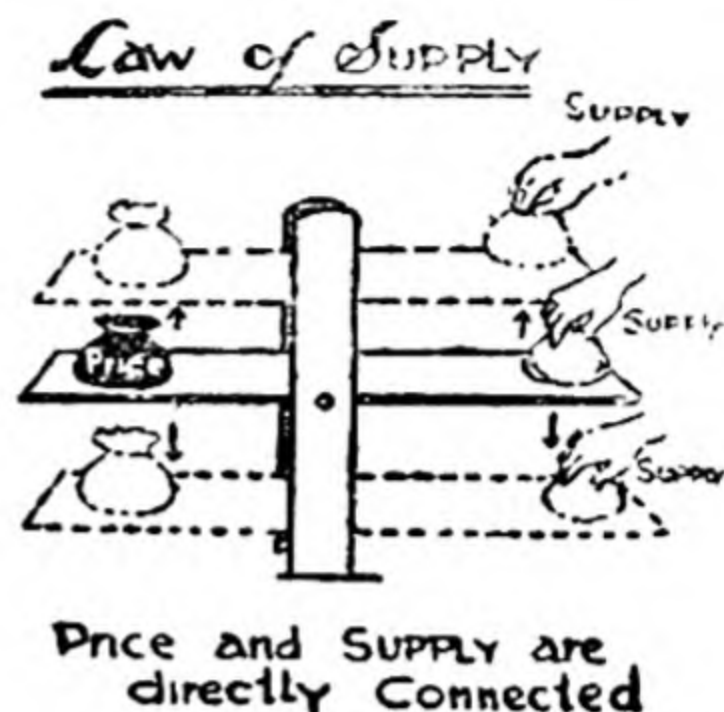
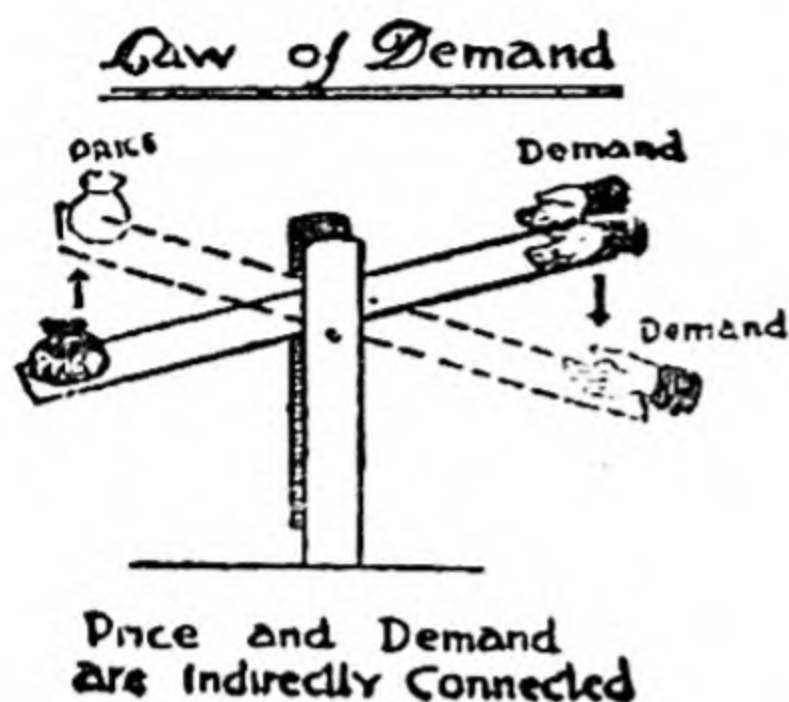


Fig. 31. Comparing the Laws of Demand and Supply.

The reason for the operation of the law is that if price increases, even those inefficient producers whose cost of production is high find it profitable to put their produce on the market while the efficient ones increase the supply. And as the price goes on increasing, the output offered for sale keeps pace with it. On the other hand, if the price decreases, some producers whose cost of production is greater than the price withhold their supply from the market and, therefore, the supply decreases. Fig. 31 compares the laws of demand and supply; demand and price move inversely while supply and price move together.

### Supply Schedule

A Supply Schedule is a list or a record showing the relationship between various prices and the supply of a particular commodity in a particular market on a particular day and at a particular time. The following is the supply schedule of a grain dealer for wheat in Muthiganj (Allahabad) on the 1st June, 1940 at 10. A. M. :

Price Rs.	Supply Mds.
6	10,000
5	9,000
4	8,000
3	6,000
2	4,000
1	1,600

A certain price must be offered to induce men to make these efforts or sacrifices. The amount produced depends on the price offered. . . . It is called Supply Price.—John A. Todd, *Political Economy for Egyptian Students*, p. 35.



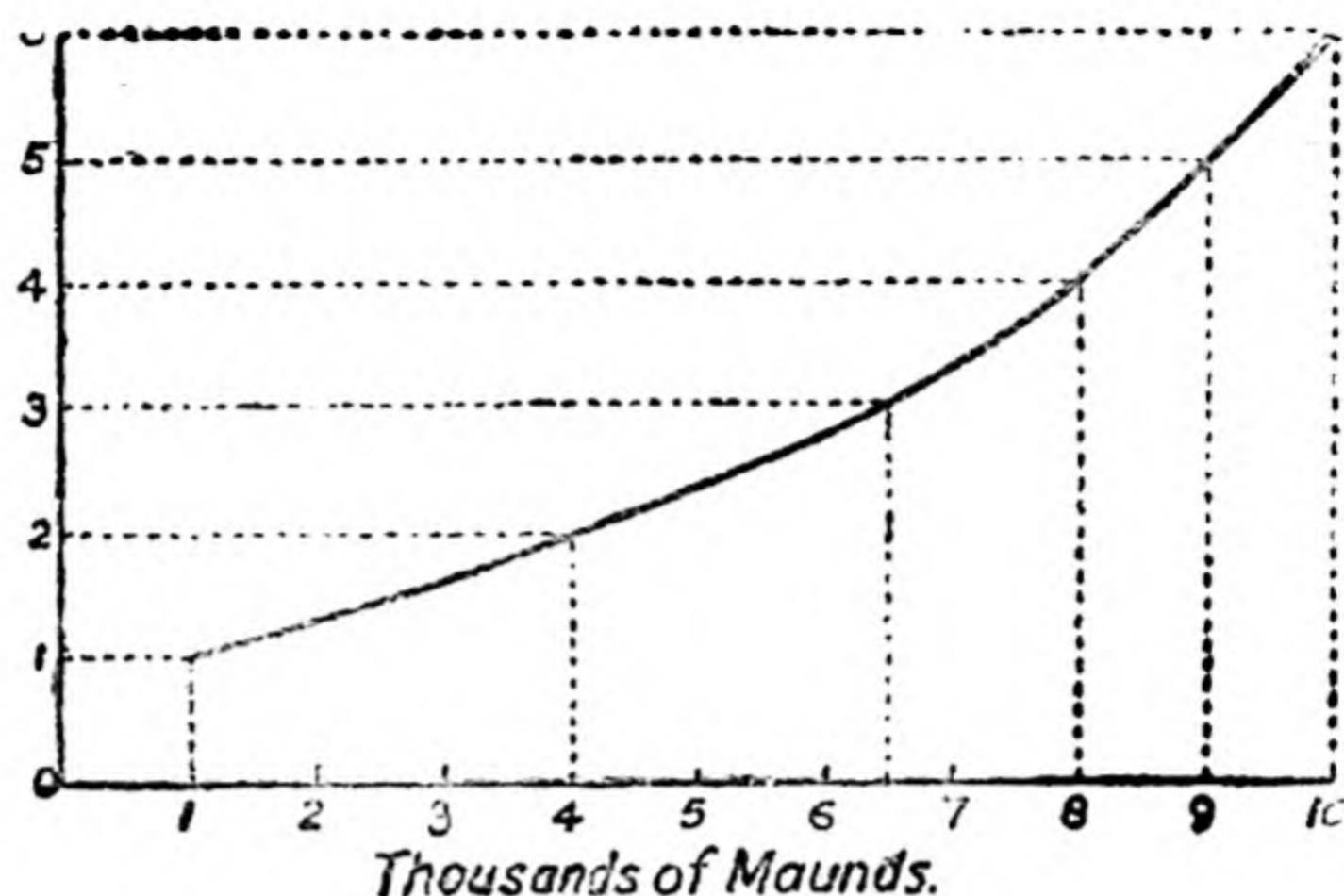


Fig. 32. Showing the Supply Curve.

The supply schedule can be represented diagrammatically. The curve thus obtained is called the supply curve. The above supply curve is the diagrammatic representation of the supply schedule of grain given above. It is obtained by measuring maunds of wheat along OX axis and price along OY axis ; plotting the points as shown by dotted lines ; and by joining the persons thus plotted.

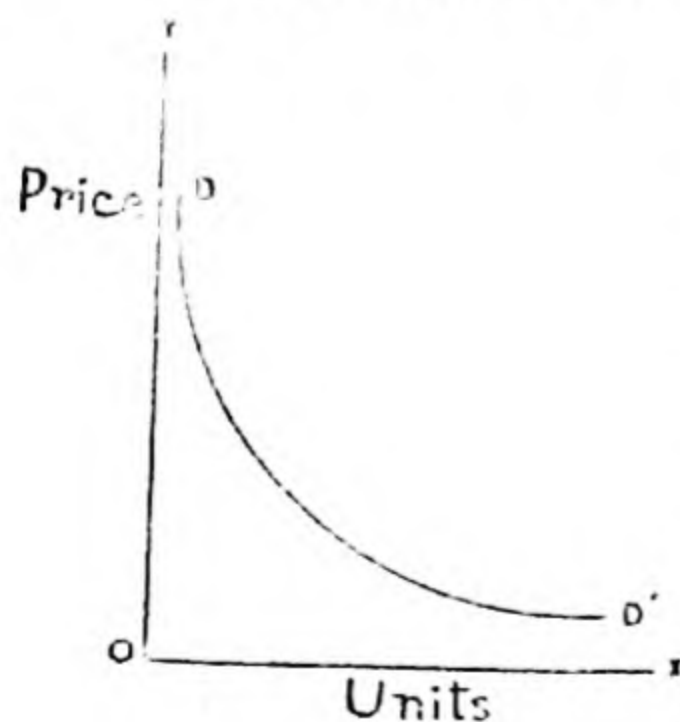
The reader should compare this curve with the demand curve shown on page 267 *ante*.

### Elasticity of Supply

The term *elasticity of supply* is not often used in Economics. But it is a useful concept. The supply of an article may be said to be *elastic* when the supply varies just proportionate to the variation in price. It may be said to be *highly elastic* when variation in supply is more than proportionate to the variation in price. It may be called *inelastic* when the change in supply is less than proportionate to a change in price.

### Supply Curve and Laws of Returns

The demand curve tends to fall from left-hand side to right-hand side. It indicates that as the price of an article increases, the demand for the commodity falls. This is clear from the adjoining diagram. This is because of the operation of the Law of Diminishing Marginal Utility ; and this applies to every commodity. As such, this is bound to be the shape of the demand curve of every commodity.



But the supply curve of every commodity does not necessarily have the same shape. The shape of the supply

curve of an article depends upon the fact as to whether its production obeys the law of increasing, constant or diminishing returns. If the production of commodity is subject to the law of diminishing returns (or increasing cost), the greater the production, the higher the cost : and the supply curve ( $SS'$ ) will go on ascending towards the right-hand side, as is clear from Fig. 34 given below. Contrary to this, if the production is subject to the law of increasing returns (or diminishing cost), the cost will decline as production increases. The supply curve ( $SS'$ ) will go on descending as is clear from Fig. 35 given below. If, however, the production obeys the law of constant returns (or constant cost), the cost will remain uniform whatever be the amount that is produced. Hence supply curve ( $SS'$ ) will run parallel to OX-axis. This is clear from Fig. 36.

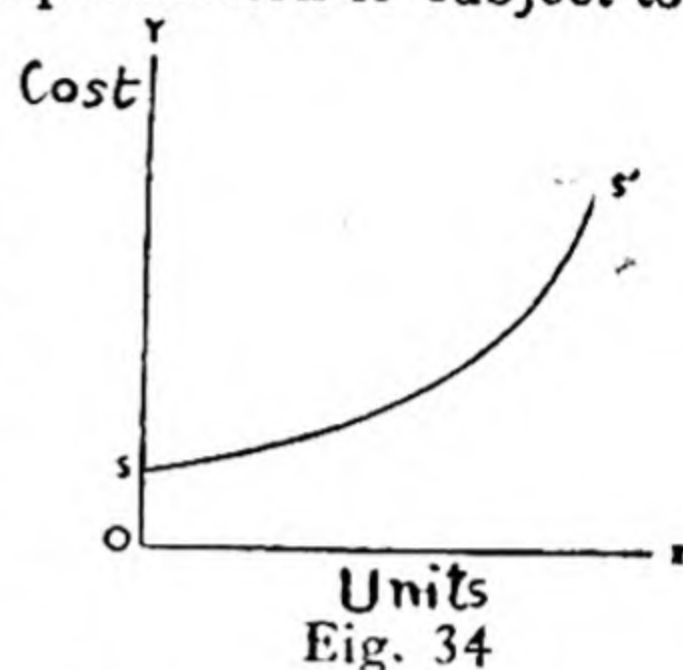


Fig. 34

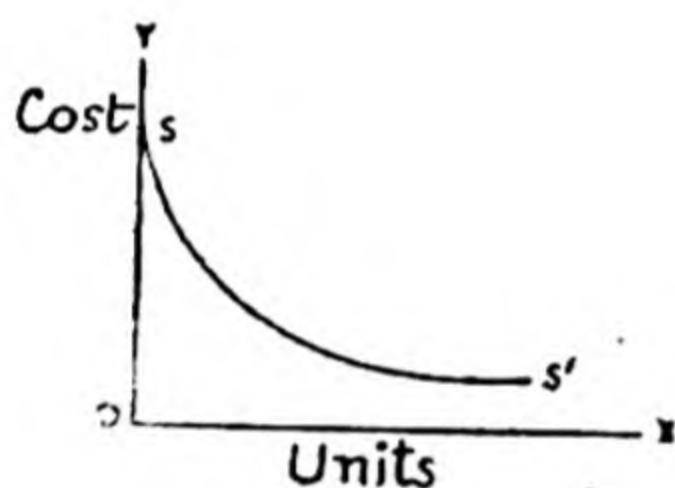


Fig. 35

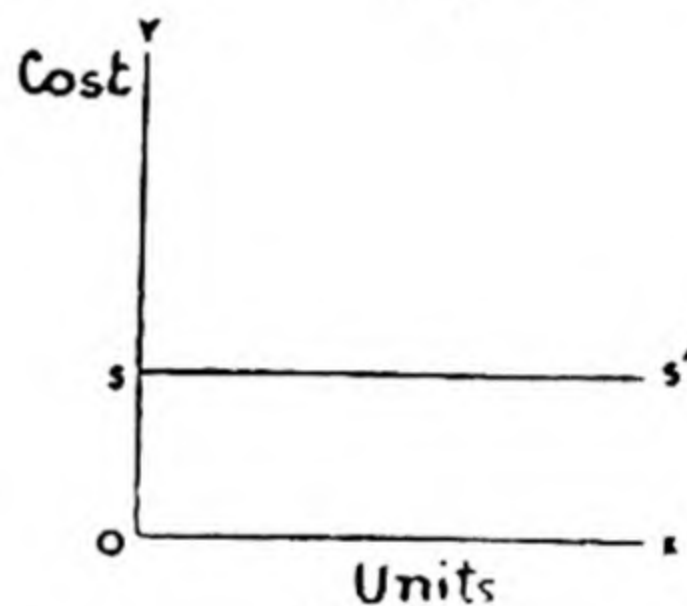


Fig. 36

### INTERMEDIATE QUESTIONS

1. Give a clear idea of Elasticity of Demand, and indicate the factors which determine it. (Bombay, I. Com., 1939).
2. Determine the nature of demand in the following cases : (i) necessities, (ii) luxuries, (iii) a commodity having several uses (iv) when an article is offered at very high or very low prices. Give appropriate illustrations. (Karachi, I. Com., 1952).
3. Distinguish between elastic and inelastic demand. How do the following affect demand—(i) the variety of uses, (ii) substitutes, and (iii) changes due to fashion ? Give examples from everyday life. (Madhya Bharat, I. A., 1952).
4. Explain the Law of Demand, and indicate its relation to the principle of diminishing utility. (Madhya Bharat, I. Com., 1952).
5. What is the relation between market and individual demand ? Examine the influence of demand on price determination. (Patna, I. A., 1952).
6. What do you mean by elasticity of demand ? Describe the factors which determine the elasticity of demand for a commodity. (Patna, I. A., 1951).
7. State and explain the Law of Demand. Are there any exceptions to this Law ? (Patna, I. A., 1950).



8. Examine the factors which bring about a change in demand independently of a change in price. (Patna, I. Com., 1952).
9. State and explain the law of demand. Has the law any limitations? (Patna, I. Com., 1953).
10. What do you mean by Elasticity of Demand? State the conditions on which the elasticity of demand for a commodity depends. (Patna, I. Com. 1949).
11. Draw the demand curve, and explain the truth it is intended to illustrate. (Punjab, Inter., 1951).
12. Explain the elasticity of demand. (Punjab Inter., 1950).
13. When and why is demand (a) elastic and (b) inelastic? Does supply also show elasticity? (Punjab, Inter., 1949).
14. Explain elasticity of demand, and state whether coal, tea, salt and diamonds have elastic demand. (Raj., I. Com., 1952).
15. What is meant by "Elasticity of Demand? Explain why the demand for luxuries is usually elastic, while the demand for necessities is inelastic (Raj., I. Com., 1952).

## GENERAL THEORY OF VALUE

A man is likely to be a better economist if he trusts to his common sense and practical instincts, than if he professes to study the theory of value and is resolved to find it easy.—*Marshall*.

A very important part of Economics is the study of the way in which value or price, is determined. How is it that a commodity sells for a particular price, neither for more, nor for less? How does the adjustment between the demand and supply take place? All such problems relate themselves to the theory of value.

## § 1. GENERAL THEORY OF VALUE

The theory of value (or price) is in fact, the pivot on which the Science of Economics rests. Economics studies human activities in relation to wealth, and wealth consists of those articles which possess value; so the theory of value is of prime importance to Economics.

The theory of value seeks to explain the following things:

1. Why does the purchaser pay a price for an article?
2. Why does the seller demand a price for his commodity?
3. How is price determined?

We shall deal with each of these points one by one.

**Why is Price Paid?**

A person is prepared to pay a price for a commodity because it satisfies his want or wants. And the more urgent is the want it satisfies, the higher is the price he is prepared to pay for it. If you are extremely hungry you may offer Rs. 10 or even Rs. 100 for a loaf of bread rather than go without it. But after your hunger is appeased and the intensity of your present want reduced to minimum, you may not pay for it even 2 as. It follows, therefore, that the price that a person is willing to pay for the first unit of a commodity is considerable because it satisfies his want at its most intense stage. For every successive unit the amount that he is prepared to pay goes on diminishing. And if he continues his purchases, a point will, sooner or later, come when the money that he has to pay for the next unit of a commodity is equal to its utility to him. He stops his purchases at this point. The price paid for the last unit measures the marginal utility. Since all the units purchased by him are similar, he will pay the same price for each of them. It follows, therefore, that the price per unit that a buyer will be willing to pay is equal to the marginal utility. The marginal utility of the commodity determines the maximum price that he can pay: he may pay less, but not more than that.

**Why is Price Charged?**

A seller charges a price for a commodity because he incurs



certain expenses in producing or acquiring it. He will not obviously sell the commodity at a price less than the expenses of production. It is the minimum price he will ordinarily accept : he may charge nothing in addition to it, but he will not ordinarily be satisfied with anything less than that.

### Fixation of Price

Thus we see that the buyer has a maximum, which is determined by the marginal utility of the commodity. He is not prepared to pay a higher price than this ; and of course tries to pay as less as possible. As against this, the seller has a minimum, which is determined by expenses of production. He is not prepared to accept a lower price than this, and he tries to charge as high a price as possible. The actual price is fixed somewhere in between these minimum and maximum limits according to the relative influence of demand and supply. Where the buyer gets an upper hand, either because his demand is not urgent or because he is comparatively skilful in bargaining, the price tends to be equal to expenses of production. But where the seller gets an upper hand, either because his desire to sell the goods is not urgent or because he is comparatively skilful in bargaining, the price tends to be equal to marginal utility. The actual price at which business is done is thus determined by the forces of demand and supply and is the one at which the demand is equal to the supply. This is fully illustrated in the following pages. This adjustment of demand and supply is known as *equilibrium* and the price is known as *equilibrium price*.

The above is the theory of value. It may be summed up as below : *Value is determined in between the marginal utility and expenses of production according to the relative forces of demand and supply and is the one at which the supply of the commodity is equal to the demand therefor.* In the short period, demand plays a more important role ; and in the long period, supply plays a more important part in the determination of price, as will be explained later.

### § 2. MARSHALL'S TECHNIQUE OF PRICE ANALYSIS

The technique adopted by Marshall for explaining the fixation of price, is known as Demand-Supply Technique. For, according to him, value is determined at a point at which demand is equal to supply.

Its Mathematical Form.			According to this technique the demand schedule and supply schedule are entered in the same table ; and then the price at which the amount demanded is equal to the amount offered for sale, is located. The price at which demand is equal to supply, will be the price that would prevail in the market, i.e., transactions would take place
Price (Rs.)	Demand (units of article)	Supply (units of article)	
2	500	100	
3	300	300	
4	150	450	



at the price. In the adjoining table, demand equals supply when the price is Rs. 3 per unit. It means that the price that would be ultimately fixed would be Rs. 3 per unit.

**Its Diagrammatic Representation.** This technique can be explained with the help of a diagram as well. We may first draw demand and supply curves on a graph paper ; and then locate the point at which these curves intersect each other. Price will be fixed at that point.

Demand and supply curves in the adjoining diagram have been drawn up on the basis of the table given above. Units of the commodity in question are measured along OX-axis, and price along OY-axis. The two curves are then drawn—DD' is the demand curve and SS' is the supply curve. They intersect each other at the point P. Therefore, PM price would be fixed ; and at this price, the quantity demanded and sold would be PN.

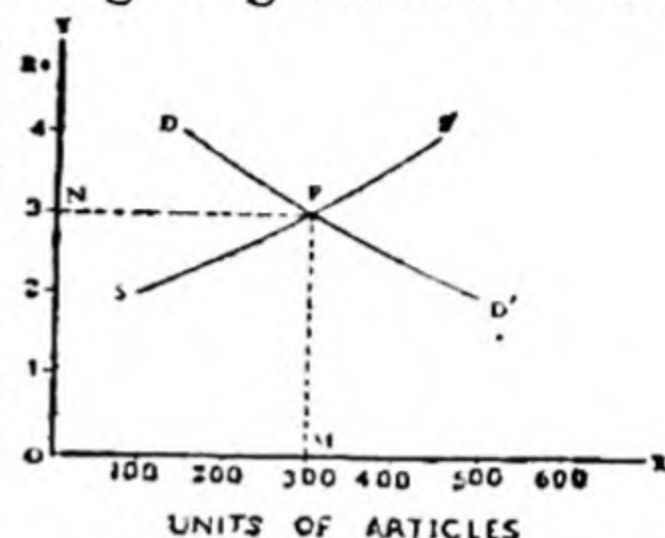


Fig. 37. Showing fixation of price.

### § 3. REAL AND MONEY COST OF PRODUCTION

In the present discussion, we shall have to make frequent use of the terms *real cost* and *money cost or expenses of production*. It is, therefore, necessary to distinguish between these two terms.

**Real Cost.** Production involves efforts and sacrifices. The efforts and sacrifices involved in producing a commodity constitute its *Real Cost of Production*. Marshall says : "The exertion of all the different kinds of labour that are directly or indirectly involved in making it, together with the abstinence or rather the waiting required for saving the capital used in making it—all these efforts and sacrifices together will be called the real cost of production of the commodity"<sup>1</sup>.

**Money Cost or Cost.** Efforts and sacrifices, however, cannot be easily measured in themselves. But they can be measured in terms of money for which they are purchased. The amount of money spent in producing a commodity is called its *Money Cost of Production* or *Cost Price* or *Cost* or *Expenses of Production*. In the words of Marshall, "the sums of money that have to be paid for these efforts and sacrifices will be called either its money cost of production, or for shortness, its expenses of production ; they are the prices which have to be paid in order to call forth an adequate supply of the efforts and waitings that are required for making it. or, in other words, they are its supply price"<sup>2</sup>. Cost usually refers to money cost.

<sup>1</sup> Marshall, *Principles of Economics*, pp. 338-339.

<sup>2</sup> *Ibid.*, page 339. In many text books, cost of production is used for both real cost and money cost. Marshall let fall a hint of caution on this point. "Mill and some other economists," he says, "have followed the practice of ordinary life in using the term, 'cost of production' in two senses, sometimes to signify the difficulty of producing a thing and sometimes to express the out-



## INTERMEDIATE QUESTIONS

1. What is the relation between cost of production and value ? (Bombay, I. A., 1939).
2. How far can we say that cost determines price ? (Bombay, I. Com., 1949).
3. What are the forces and factors that determine price ? How are prices related to the cost of production ? (Poona, I Com., 1950).
4. "Value is determined by the general relations of demand and supply." Explain and illustrate. (Utkal, I. Com., 1951).
6. "Price is determined by demand and supply." Explain this statement (U. P., I. Com., 1955).
6. What do you understand by the value and place of a commodity ? How is this value determined ? (U. P., I. Com., 1952).
7. Give the definition demand and price. Explain whether price is the only factor causes fluctuations in demand. (Sagar. I. A., 1953).

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lay of money that has to be incurred in order to induce people to overcome this difficulty and produce it. But by passing from one use of the term to the other without giving explicit warning they have led to many misunderstandings and much barren controversy."—Marshall, *Economics of Industry*, p. 195 n.

## THEORY OF VALUE UNDER PERFECT COMPETITION

In perfect competition . . . there is no advertising of a competitive nature, for when each firm has a perfectly elastic sales curve it can sell all it wants at the market price and advertising will do it no good.—*Kenneth E. Boulding.*

We have already explained the three degrees of competition, *viz.* perfect competition, zero competition and imperfect competition ; and corresponding to them, three kinds of markets, *viz.*, perfect market, monopoly market and imperfect market. Value is determined in a separate way in each state of competition and each type of market. In other words, there is a separate theory of value under perfect competition, a different theory of value applicable to conditions of monopoly, and quite another theory that applies to imperfect competition. In this chapter we will discuss the theory of value applicable to perfect competition.

## § 1. TIME ELEMENT IN A PERFECT MARKET

Marshall stated that in considering perfect competition, we should always pay attention to the time that is taken by the price to get fixed. He said that the application of the general theory of value varies according to the time involved in the determination of price. From this point of view, we should distinguish between short period and long period, as under :

(1) *Short Period or Market Price.* It is the price determined in short period. *Short period is the period in which the supply of a commodity cannot be fully adjusted to the demand for it.* The actual period which may be called short, depends upon the nature of each commodity.

(2) *Long Period or Normal Price.* It is the price determined in long period. *Long period is the period in which the supply of a commodity can be adjusted to the demand for it.* The actual period which may be called long, depends upon the nature of each commodity.

Price in short and long periods is determined by the relative forces of demand and supply ; *but in short period, demand plays a decisive part while in long period supply is the decisive factor.*

## § 2. SHORT PERIOD OR MARKET PRICE

We shall now describe how the price of a commodity is determined in short period, say, on any particular day in a market. It is known as the *short period or market price.*

**Equilibrium in Short Period**

We take the example of a wheat market. Let us assume, for the sake of simplicity, that all the wheat in the market is of the same



quality. The quantity which each seller would be willing to sell at any particular price will depend upon his own need for money and by his estimate of the future and present conditions of the wheat markets. There are some prices which no seller would accept ; some which no one would refuse. There are other intermediate prices which will be acceptable to some and not to others. At some prices, some would offer a particular quantity for sale but may offer more if price goes up. Let us suppose that when the price of wheat is Rs. 2 per maund, 500 maunds are offered for sale. If price rises to Rs. 2-8-0 per maund, another 200 maunds will be offered ; while the holders of another 200 maunds would be tempted to sell only at Rs. 3 per maund.

Again, let us suppose that if the price is Rs. 3 per maund, only 600 maunds would be purchased ; if it is Rs. 2-8-0 per maund, another 100 maunds will be purchased ; and that at Rs. 2 per maund yet another 250 maunds will be bought.

These facts may be put in a table in the following way :—

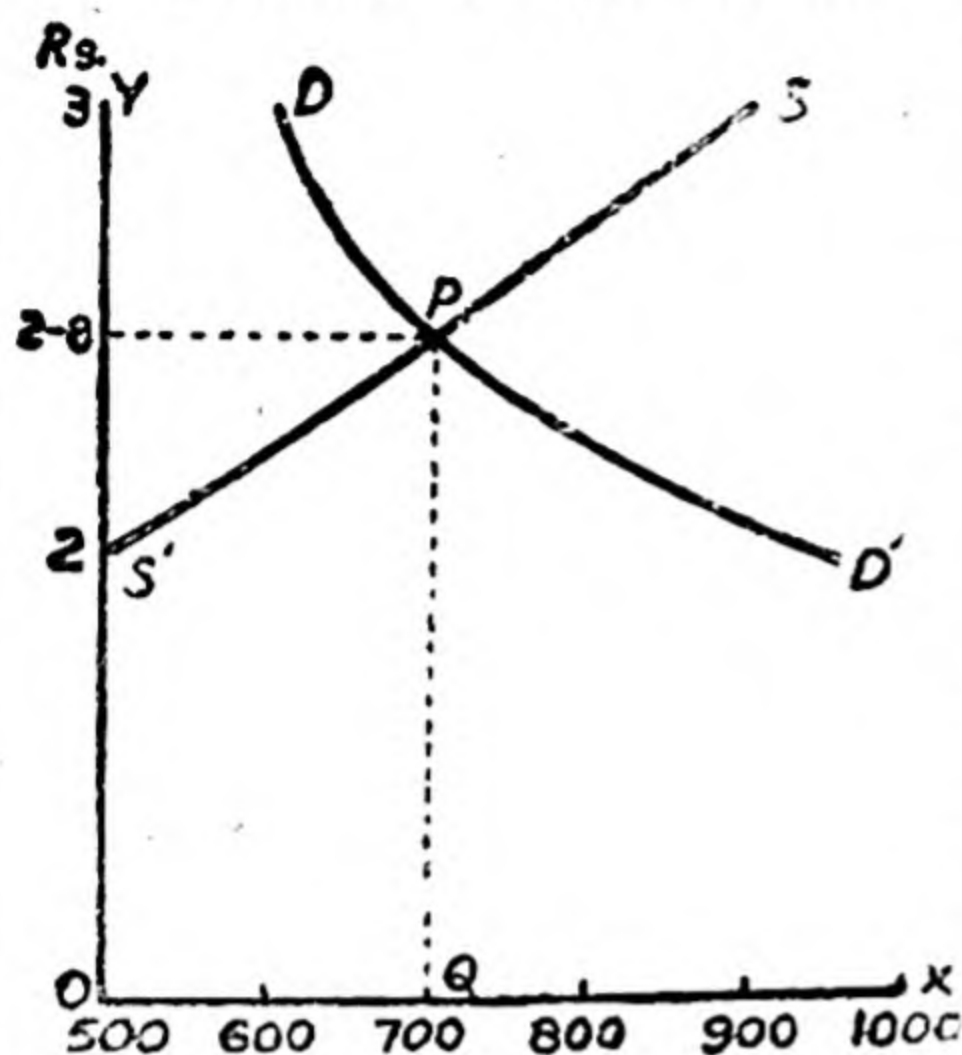
At the price	Holder's will be willing to sell Maunds	Buyers will be willing to purchase Maunds
Rs.    as.    p.		
3    0    0	900	600
2    8    0	700	700
2    0    0	500	950

Now, suppose the price at any particular time is below Rs. 2-8-0 per maund. At this price even those sellers who would sell at that price rather than leave the market, would argue that at that price the demand would be more than the supply ; so they will wait and by waiting help to bring the price up.

If the price rises above Rs. 2-8-0 per maund, buyers will argue that the supply will be much greater than the demand at that price ; therefore, even those of them who would rather pay that price than go unserved, wait ; and by waiting help to bring the price down.

So the price will be tossed hither and thither like a shuttlecock, as one side or the other gets the better in the "higgling and bargaining" of the market.<sup>3</sup> But *ultimately business will be done at Rs. 2-8-0 per maund, at which price the demand and supply are equal* for, as we have seen, business cannot be done either at a higher or a lower price than that.

In order to represent the above facts graphically, let us take



OX for representing quantity of the commodity and OY for price. By plotting the points with the help of the given figures, demand curve DD' is drawn and the supply curve SS' constructed. They cut at P. Therefore, P is the price at which transactions take place. At PQ price, OQ quantity of the commodity is demanded and supplied.

We conclude, therefore, that "in any market at any time the price will be so adjusted, through the competition of buyers and sellers, that the quantity demanded will be equal to the quantity offered at that price."

This is called the "temporary

equilibrium price" (Marshall) or the "equation price" (Mill).

### Relative Strength of Demand and Supply in Market Price

Price, as we know, is determined by the relative strength of demand and supply somewhere between the marginal utility and cost of production. But the question is : Which of these two forces exerts a more decisive influence in the determination of price in short period ?

In short period the supply is fixed. For instance, on a particular day at a particular time the supply of fish in the fish market is fixed, and cannot change in response to change in price. But there is no such fixity with regard to the demand for fish: demand may increase or decrease. In the determination of the market price, the supply is a fixed and given factor; it is the variations in demand which determine price. If demand rises, the price shoots up; while if the demand decreases, the price falls.

### § 3. LONG PERIOD OR NORMAL PRICE

We shall next discuss the determination of price in the long period. A long period is the period in which the supply of a commodity can be varied. The price ruling in the long period is called *Long Period* or *Normal Price*.

#### Normal Price

The market price of a commodity may vary from day to day and from time to time, but if we analyse such market fluctuations



over a fairly long period, we will find a more or less constant price above and below which the market price tends to fluctuate. The price level to which the market tends to return repeatedly is the price prevailing in the long period and is called *Long-Period* or *Normal Price*.<sup>5</sup> As the normal price approximates cost price, it is also sometimes defined as the *price which corresponds to the cost of production*.<sup>6</sup>

### Determination of Normal Price

The normal price of a commodity is determined by the forces of demand and supply, as is the case in the short period. But here *the cost of production plays the decisive role*. For, if the normal price remains above its cost of production, profits will accrue; consequently production will increase, new producers will be attracted to industry while old producers will be impelled to increase their volume of production. The supply having thus increased, the price will fall. On the other hand, if the normal price is lower than the cost of production, reverse conditions will occur: losses will begin to appear and production will be curtailed—some producers will withdraw and others will work for shorter period. These conditions will result in the reduction of the supply and so cause price to rise again. Thus for a given output, normal price, must be equal to the expenses of production in the long period.<sup>7</sup> It is apparent, therefore, that in this case (normal) price tends to approximate the expenses of production.

As the cost of production is the determining factor of normal price, the latter would vary according as the former changes. The change in the cost of production depends upon the laws of return.

### Normal Value and Laws of Returns

(1) If the article in question is produced under the *law of diminishing returns or increasing cost*, the cost of production would increase if the demand increases and fall if the demand decreases. The normal price would fluctuate likewise.

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5 "Market prices, that is, the prices at which goods are actually sold from day to day, are variable and irregular in their operation. But behind most market prices are *normal prices*, which are much less subject to changes. This is because the conditions of production are more stable than the market conditions under which goods are bought and sold, and serve constantly to recall prices from the more or less violent fluctuations of the market."—Seager, *Principles of Economics*, p. 120.

6 Also see Moreland, *An Introduction to Economics*, pp. 208-9.

7 The expenses of production of different firms differ. It may be asked, therefore, which is the firm whose cost of production we are referring to above, the average or the "representative firm." See Marshall, *Principles of Economics*, pp. 342-343. Also Pigou, *Economics of Welfare*. Some writers of textbooks state that it is the marginal firm whose cost determines normal price. But this is wrong.

In the adjoining figure  $DD'$  is the demand curve and  $SS'$  is

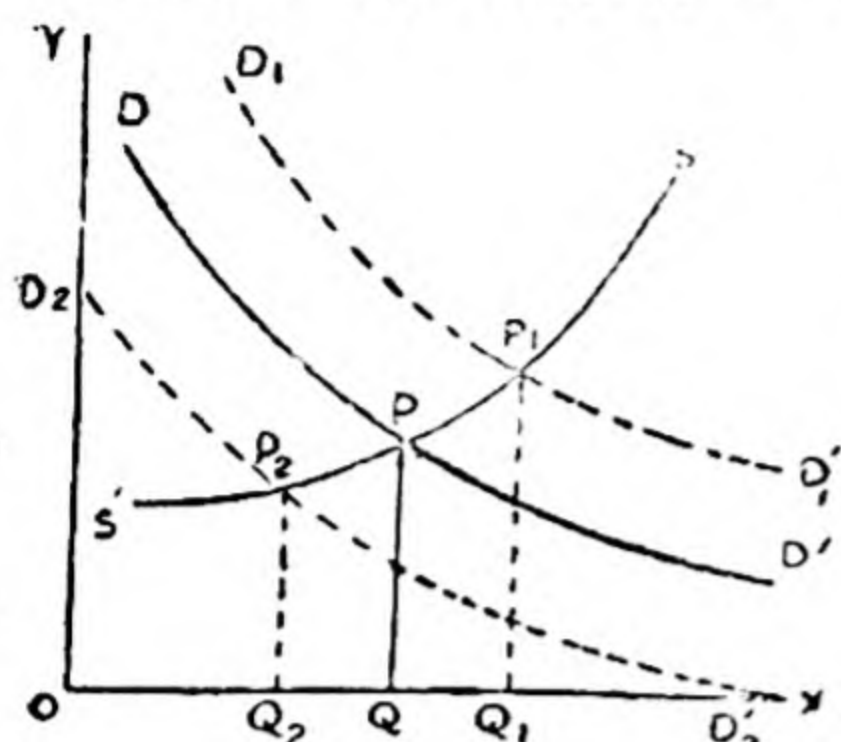


Fig. 38

would become  $P_1Q_1$ . Conversely, if the demand falls, the demand curve may assume the position of  $D_2D'_2$ . This meets  $SS$  at  $P_2$ . So the price comes down to  $P_2Q_2$ .

Thus we see that *if the article in question is produced under the law of diminishing returns or increasing cost, the normal price would rise if demand increases and would fall if demand decreases.*

(2) If the article in question is produced under the *law of increasing returns or diminishing cost*, the cost of production would decrease if the demand increases and increase if the demand decreases. The normal price would fluctuate likewise.

In the adjoining figure  $DD'$  is the demand curve; and  $SS'$

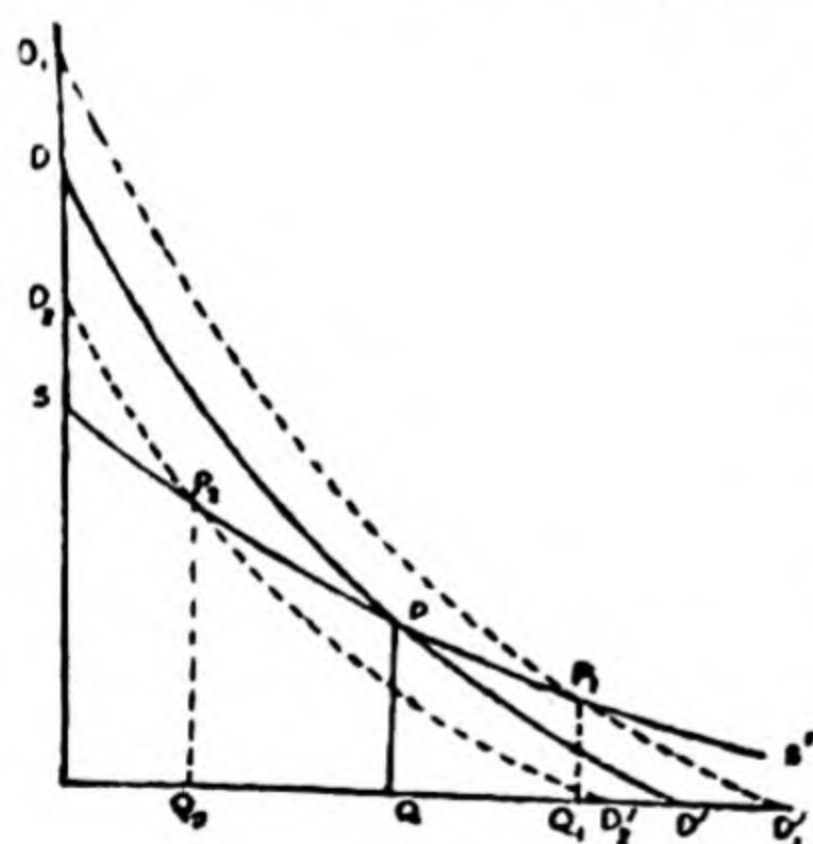


Fig. 39

supply curve at  $P_2$ ; so that  $P_2Q_2$  will be the normal price. The price thus increases as a result of a fall in demand.

Thus we find that *if the article in question is produced under the law of increasing returns or diminishing cost, the normal price would fall if demand increases and rise if demand falls.*

the supply curve of a commodity produced under the law of diminishing returns or increasing cost. The supply curve goes on rising, which shows that the increasing supplies will be forthcoming only at rising prices.

These two curves meet at  $P$ . Hence  $PQ$  would be the normal price. Now if demand increases due to any cause, it would assume the position of the  $D_1D'_1$  curve. This curve cuts the  $SS'$  curve at  $P_1$ . So the price would now increase: it

the supply curve of an article produced under the law of increasing returns or diminishing cost—the supply curve shows a descent, thus indicating fall in cost as supply increases. The two curves meet at  $P$ , so that  $PQ$  is the normal price.

Now let the demand increase. It now assumes the position of the  $D_1D'_1$  curve. This meets the supply curve at  $P_1$ ; so that  $P_1Q_1$  will be the normal price. The price thus decreases as a result of an increase in demand.

Again if the demand falls, the demand curve will take the position of the  $D_2D'_2$  curve. This meets the



(3) If the article in question is produced under the law of constant returns or fixed cost, the cost would remain the same irrespective of an increase or decrease of price. The normal price would also remain fixed.

Thus we observe that *if the article in question is produced under the law of constant returns or cost, the normal price remains the same irrespective of a rise or fall in demand.*

In the adjoining figure,  $DD'$  is the demand curve and  $SS'$  is the supply curve of a commodity produced under the law of constant

returns or cost. The supply curve is parallel to  $OX$  axis, which shows that any quantity can be supplied at the same cost.

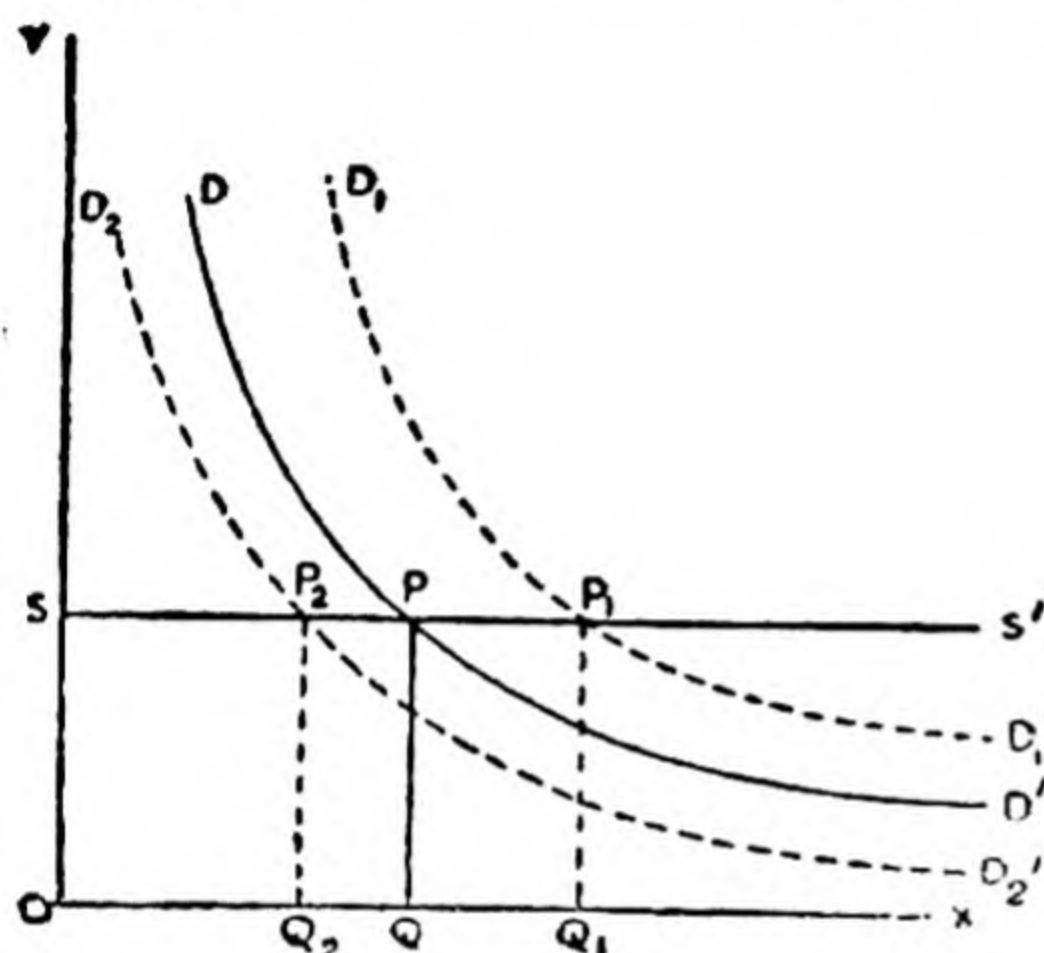


Fig. 40

The demand curve  $DD'$  cuts the  $SS'$  at  $P$  so that  $PQ$  is the price. Now  $D_1D'_1$  shows an increase in demand which meets the supply curve at  $P_1$ ; at  $P_1Q_1$  is the resulting price. But  $P_2Q_2$  is equal to  $PQ$ . Then again  $DD'$  shows a decrease in demand but there the resulting price,  $D_2Q_2$  is equal to  $PQ$ .

### Articles Having No, or Little Cost of Production

The statement that the value of a commodity is normally equal to its cost of production, sometimes misleads students to suppose that since it is the cost of production of a commodity which gives it its value, if there were no cost of production, there would be no value. Cost of production, it should be borne in mind, represents only the supply side of the equation of exchange, and does not concern itself with its demand side. But price is determined both by demand and supply. As such, the above statement is not quite correct.

An article may have little or no cost of production but may be extremely valuable. Suppose you see a diamond lying in a desert you are crossing. You lift it up. Its value is immense though its cost of production is negligible. You had simply to bend yourself and pick it up. Why? Because the demand for diamonds is far greater than their supply.

Again, an article may have high cost of production but little value. If somebody takes into his head to construct a house in a desert, it will be a very costly project, indeed. But since few will like to live in the midst of a desert, its value will be very little. Its cost is great but the demand for it is so small that its value is very low.

Price, it should be remembered, is the function of both, the demand and the supply.

### Market and Normal Price

The difference between market price and normal price is probably clear by this time. Market price is the price ruling at any particular time ; normal price is the price which rules in the long period. Normal price equals cost price : market price *tends* to be equal to the normal price and therefore cost price.

#### § 4. RELATIONSHIP BETWEEN MARKET PRICE, NORMAL PRICE AND COST

From the above discussion it is plain that there is a very close relationship between market price, cost and normal price. Normal price is equal to the cost or money cost of production. And market price fluctuates round normal price; it may vary from time to time but it cannot remain far away from the normal price for any considerable period. If it remains higher than normal price for long, unusual profits will begin to appear, production will increase in consequence and demand remaining the same, the market price will tend to fall. This movement will stop only when the market price comes close to the normal price and unusual profits cease to occur. Similar reasoning will show that the market price cannot remain below normal price for long. For if this happens, unusual losses will begin to appear, production will shrink in consequence and demand remaining the same, market price will tend to rise. This upward movement will stop only when the market price comes close to the normal price and unusual losses cease to occur. Thus the market price cannot diverge violently from the normal price for long; it simply fluctuates just above and below the normal price and shortly returns towards it.



Fig. 41. Showing the relationship between market price, normal price and cost price.

Normal price, then, equals cost price ; and market price fluctuates around the normal or cost price, always showing tendency to equate the latter. The above diagram illustrates this point.

#### § 5. INFLUENCE OF UTILITY AND COST ON PRICE

It is sometimes asked whether cost or utility governs price. As a matter of fact, both determine price, in the short and long periods alike. In the short period, however, supply is fixed and demand varies ; therefore demand (or marginal utility) exerts a more decisive influence. In short period, then, the price is determined by *demand* in relation to supply, or marginal utility in relation to cost. In the long period, cost is of supreme importance as shown above and exerts a more decisive



influence. Hence normal price is determined by supply in relation to demand or cost in relation to utility.

In connection with this controversy, Marshall very aptly observes : "We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production. It is true that when one blade is held still, and the cutting is effected by moving the other, we may say with careless brevity that the cutting is done by the second ; but the statement is not strictly accurate. In the same way, in short period, if a person chooses to take the stock for granted and says that the price is governed by demand, his brevity may perhaps be excused so long as he does not claim strict accuracy. In the long period similarly if a person takes it for granted that there will anyhow be enough demand for the commodity, he may be excused for ignoring the influence of demand, and speaking of (normal) price as governed by cost of production provided only he does not claim scientific accuracy. Thus we may conclude that, *as a general rule*, the shorter the period which we are considering, the greater must be the share of our attention which is given to the influence of demand on value ; and the longer the period the more important will be the influence of cost on value."<sup>8</sup>

#### INTERMEDIATE QUESTIONS

1. How far is speculation beneficial in modern economic organisation ? What are its abuses ? (Andhra, I. Com., 1944).
2. Outline the theory of value for goods produced and sold under competitive conditions, taking into account all the factors involved. (Bombay, I. A., 1940).
3. What is the relation between cost of production and value ? (Bombay, I. A., 1939).
4. Discuss the relative merits and demerits of competition and monopoly. (Bombay, I. A., 1939).
5. How far can we say that cost determines price ? (Bombay, I. Com., 1949).
6. Write a note on " Utility and Value." (Bombay, I. Com., 1949).
7. Explain, with examples, how value is determined in the short period and in the long period. (Bombay, I. Com., 1948).
8. Explain with the help of a diagram the relation between price, utility and cost of production under free competition. (M. B., I. A., 1953).
9. How is the value of a commodity determined in a market in which free competition prevails ? Use a diagram to illustrate your answer. (M. B., I. A., 1952).
10. Distinguish between Market Price and Normal Price, and show how the price of a commodity is determined in the long period in a competitive market. (M. B., I. Com., 1953).
11. Distinguish between Normal Price and Market Price. How are they determined ? (Osmania I. A., 1952).
12. Distinguish between market value and normal value. Show how market value is determined. (Osmania, I Co., 1952).
13. What is the relation between market and individual demand ? **Examine** the influence of demand on price determination. (Patna, I. A., 1952).

<sup>8</sup> Marshall, *Principles of Economics*, pp. 348-350.

14. What do you mean by market value? How is it determined? (Patna, I. A., 1952).
15. Describe how price is determined under conditions of free competition. (Poona, I. Com., 1950).
16. How is the market price of the following commodities determined (a) fresh fruits, and (b) wheat? (Punjab, Inter., 1951).
17. What are the forces and factors that determine price? How are prices related to the cost of production? (Punjab, Inter., 1950).
18. How does the determination of market price differ from that of normal price? (Punjab, Inter., 1949).
19. What do you understand by the value and price of a commodity? How is this value determined? (Raj., I. A., 1953).
20. Explain with the help of diagrams effects or changes in Demand on Value under Increasing, Diminishing and Constant Returns. (Raj., I. A., 1953).
21. Fully explain how market Value is determined, and examine its relationship with Normal Value. (Ra., I. A., 1952).
22. What is meant by equilibrium price? How is it determined under competitive conditions? (Raj., I. A., 1951).
23. Fully explain how exchange value is determined in a market under competitive conditions? (Raj., I. Com., 1953).
24. Determine the influence of cost of production on price. Under what conditions is it a dominant factor and why? (Raj., I. Com., 1952).
25. How is value determined? Discuss the influence of demand and supply on it. (Utkal, I. A., 1951).
26. Explain how market value is determined under conditions of competition. (Utkal, I. Com., 1952).
27. "Value is determined by the general relations of demand and supply." Explain and illustrate. (Utkal, I. Com., 1951).



## CHAPTER 41

### THEORY OF VALUE UNDER MONOPOLY

When any seller's output constitutes a substantial part of the whole there is scope for various sorts of monopolistic action.—A. C. Pigou.

We have discussed above the determination of value under perfect competition. Now we will study as to how value is determined under monopoly.

#### § 1. MEANING OF MONOPOLY

When there is only one seller in the market, such a condition is denoted by the term 'monopoly'. Monopolist has full control over the market. He can sell his commodity at any price he likes. He alone has the control on price ; hence he is called monopolist. A monopolist can certainly fix the price at which he will sell his commodity; but he cannot at the same time determine the amount of commodity that purchasers will buy. In fact, if he charges a high price, the demand for his commodity will be less and if he charges a low price, the demand for his commodity will be great. The price is certainly under the full control of the monopolist ; but demand is not under his control. Demand is determined by purchasers.

In practical life we do not come across any case when a seller has 100% control on supply. The Brazilian Coffee Association controls only 90% of the coffee produced in the world. J. P. Coats & Sons control only 90% of the sewing cotton produced in the world. Complete monopoly is a very rare occurrence.

#### Kinds of Monopoly

There are different kinds of monopoly : (i) *Natural Monopoly*. If the supply of a commodity is localized in a single place, then natural monopoly emerges. For instance, Pakistan has monopoly of raw jute ; and India has monopoly of manganese. (ii) *Legal Monopoly*. Sometimes a monopoly is a result of law. For instance, the right of note issue has been given by law to the Reserve Bank of India only. (iii) *Public Monopoly*. Sometimes a monopoly is created because it is in public interest. Monopoly of public utility enterprises like railways and telephones is given to single companies so that several companies should not lay down railway lines or fix poles on roads, which would be very greatly inconvenient to the general public. (iv) *Trade Monopoly*. Sometimes a businessman establishes a monopoly by liquidating his competitors. This is the monopoly of ordinary type.

#### Value under Monopoly

The monopolist wants to make maximum profit. Hence he fixes the price of his commodity in such a way that he might realise maximum profit. He knows that if he keeps the price too high, his

sales will be less ; and if he keeps the price at a lower level his sales will be more. He will decide in favour of that alternative which will bring him largest profit. Which particular stage will yield maximum profit, cannot be predicted and is not fixed. It depends upon the nature of the nature of the commodity. If the article is of daily use, like salt, the buyers will have to purchase it even if its price is high, and the monopolist will earn huge profits by keeping the price high. But if the commodity is one of luxury, like motor cars, the monopolist can earn maximum profit by keeping the price at a low level.

*Illustration.* We can make this point clear by taking an illustration. Suppose the price, demand and cost of a new book which a publisher intends publishing is likely to be as follows :

Price (per book)	Demand	Cost (per book)
Rs.		Rs.
10	1,000	9
8-8	2,000	7
6	3,000	5
3	4,000	3
2-8	5,000	2
2	8,000	1-8

In order to determine the price at which he should sell his book, he should estimate profit per book at every price. If we deduct cost from price, we will get profit per book. If 1,000 copies are printed and they can be sold for Rs. 10 each, while the cost per book is Rs. 9 only, then a profit of Rs. 1 per book will be earned. As, 1,000 copies will be sold, the publisher will earn Rs. 1,000. Similarly, profit at other possible prices will be as given in the table below :

Price (Per book) Rs.	Demand	Cost (per book) Rs.	Profit (per book) Rs.	Total Profit Rs.
10	1,00	9	1	1,000
8-8	2,000	7	1-8	3,000
6	3,000	5	1	3,000
3	4,000	3	0	—
2-8	5,000	2	0-8	2,500
2	8,000	1-8	0-8	4,000

From the above table it is clear that if the publisher prints 8,000 copies and sells them at the rate of Rs. 2 per copy, he will earn maximum profit. Hence he will fix the price of the book at Rs. 2 per copy.



It should be clear from above that in order to earn maximum profit, it is not necessary that the seller should sell his commodity at the highest available price, or in the largest possible quantity. He should fix the price at a level which can give him maximum profit.

### **Value under Monopoly and Perfect Competition**

What is the difference between the determination of value under monopoly and that under perfect competition? Under perfect competition, price is fixed at a point at which demand for the commodity is equal to its supply. In the above table, the price of the book will be Rs. 3 under perfect competition because at this point the demand for the book is for 3,000 copies which is also its supply. It is worth remembering that at this point, profit per book is zero and so the total profit is also zero. As against this, under monopoly value is determined at such a point when the total profit is maximum. Under monopoly, value is more than cost.

### **INTERMEDIATE QUESTIONS**

1. Discuss the relative merits and demerits of competition and monopoly. (Bombay, I. A., 1939).
2. (a) Compare value under monopoly and value under competition, (b) Under what circumstances is monopoly desirable? (Bombay, I. Com., 1939)
3. What is monopoly? Give examples to prove its harmful effects on the economic life of the people. (Osmania, I. A., 1951).
4. What is monopoly? What are the advantages and drawbacks of monopoly? (Patna, I. A., 1950).
5. What is the relation between cost of production and value under competitive and monopoly conditions? (Patna, I. A., 1947).

## CHAPTER 42

### THEORY OF VALUE UNDER IMPERFECT COMPETITION

We have already stated that the concept of Imperfect Competition was introduced in Economics in the year 1932 by Mrs. Joan Robinson and Professor Chamberlin. We will explain it below, and also the manner in which price is fixed in an imperfect market.

#### § 1. CONCEPT OF IMPERFECT COMPETITION

We have already explained that imperfect competition can arise because of the following reasons :

- (a) Absence of free competition between buyers and sellers because of temperament, friendship, lethargy or any other reason,
- (b) Limited number of buyers and sellers in the market,
- (c) Ignorance of price being charged by different sellers.

The result of these conditions is (a) that the same commodity is sold at different prices in the same market; (b) that every seller acquires some control on price, *i. e.* he can increase the price slightly without losing customers ; and (c) that the more the quantity of the output sold by the seller, the less is its price. If, for instance, he can sell 100 caps for Rs. 1-8-0 each, the price might fall down to Rs. 1-4-0 each if he increases the supply to 150 caps.

#### § 2. DETERMINATION OF PRICE UNDER IMPERFECT COMPETITION

We will now discuss how price is determined under Imperfect Competition, on the basis of the theory given by Mrs. Joan Robinson.

In order to decide whether he should sell one more unit of a commodity or not, a seller has to consider two things :

(a) What will be the addition to the total cost if he produces one more unit ? This has been called "Marginal Cost" by Mrs. Robinson.

(b) What will be the addition to the total sale proceeds (*i. e.* revenue) by selling one more unit ? This has been called "Marginal Revenue" by Mrs. Robinson.

So long as Marginal Revenue is in excess of Marginal Cost, it will pay the seller to sell the marginal unit. His profit will increase by the excess of Marginal Revenue over Marginal Cost. Suppose if addition made to total revenue by selling one more unit is equal to Rs. 10 and the addition made to total cost by acquiring one more unit is Rs. 6, then he will make an additional profit of Rs. 4 by selling this extra unit. He will go on selling more units so long as Marginal Revenue is more than Marginal Cost. But in course of time, a point will be reached where Marginal Revenue equals Marginal Cost.



He will stop his operations at this point ; because after this, Marginal Revenue would be less than Marginal Cost and he would incur loss.

It is clear from this that under imperfect competition, the seller would produce and sell that amount of output at which Marginal Revenue is equal to Marginal Cost. He will earn maximum profit by selling this quantity.

The price at which he would sell this quantity would be the price at which it can be purchased by purchasers in accordance with their demand schedule or curve.

In conclusion, the seller would, under imperfect competition, sell that amount of output at which Marginal Revenue equals Marginal Cost and he would sell it at the price obtainable in the market in accordance with market demand. This would give him maximum profit.

### § 3. PRICE CONTROL AND RATIONING

#### Price Control

We have discussed above the determination of value under perfect competition, imperfect competition and monopoly. In all these cases, value is determined by the forces of demand and supply. Sometimes the conditions present in a country are so abnormal that the determination of prices cannot be left to these two forces. A period of war is an example. In war time, plenty of goods is sent to the various theatres of war ; and besides several factories and fields are destroyed. Hence goods for civilian consumption are scarce, that is, their supply is less than the demand for them. Consequently prices begin to rise. When prices rise beyond a certain extent, the public is hard hit. In particular, the salaried class getting fixed income finds at such a time that its purchasing power shrinks with every rise in prices. Hence the Government fixes prices of various commodities by law. The fixation of prices by Government is known as *Price Control* ; and the prices thus fixed are called *Controlled Prices*. No businessman can sell at prices higher than controlled prices. Such a conduct will be illegal.

When price control is enforced and goods are sold in the market at controlled prices, the market is called *Fair Market*. But if the supply of a commodity is very short, businessmen are tempted to realise more than controlled prices from their customers ; and the buyers who are really needy have to pay such high prices. When a commodity is sold in a market at prices higher than the controlled price, such a market is called *Black Market*. The existence of a black market often indicates that government administration is incapable of controlling powerful economic forces.

#### Rationing

When scarcity is acute and price control is found inadequate to keep down prices, the Government enforces rationing of articles. By rationing is meant the fixation of the quantity of an article that an individual can purchase during a given time (say, a week, a fortnight



or a month). He cannot purchase an article in a larger quantity. Rationing causes a little privation to everybody. But in its absence, the buyers will be able to secure the article only at very high prices. This will cause tremendous hardship particularly to members of middle and poor classes. It will lead to reduced consumption, a fall in the standard of living and ultimately a reduction in productive efficiency.

#### § 4. SPECULATION

Speculation is a special form of trading which aims at deriving profits from differences in prices ruling at different times. A speculator purchases goods when their prices are low; and sells them after some time when the prices have sprung up high. For instance, during the month of May, which is the crop-moving season for wheat, wheat begins to flow in *mandis* in large quantities and is sold at low prices. Later on, after some time, the prices of wheat increase. Speculators purchase wheat in May and sell it later on at higher price thus earning profits. The time intervening between the purchase and sale of goods by speculators is usually considerable. Speculation plays an important part in the determination of the prices of the staple commodities.

The economic service performed by speculation is very great. When the supply of goods is large and the price is sagging low, speculators help to keep up the price by making purchases. Again, when after some time the supply of goods is reduced and the price tends to shoot up sky-high, they help to keep down the price by offering goods for sale. Thus they greatly help in steadying the prices. The stabilisation of prices is a very useful factor inasmuch as it enables both producers and consumers to come to definite and lasting conclusions without any fear of their being upset by untoward price fluctuations.

In order to be able to profit out of price differences, the speculator must have a clear insight into the working of demand and supply; a good foresight regarding the future trend of demand, supply, fashion, etc ; and control on the human tendency to become reckless and rash.

Speculation has, however, a tendency to deteriorate to an evil instrument. If it is reduced to pure gambling, the market may be flooded with artificial scarcity or artificial surplus of goods, baseless rumours regarding demand and supply, cornering, gambling in necessities of life, and the tossing of the prices of staples here and there frequently and widely. Such wild speculation is often based on knowledge of the future trends and is conducted with rashness and recklessness. That is why we often find instances of merchant princes and millionaires becoming paupers in no time and of paupers becoming rich almost overnight. It is because of this unwholesome feature that speculation (or *sattebazi* as we call it) is often looked down upon. To check these evils, the Governments of various countries have attempted to control speculation, though not with much success.



## INTERMEDIATE QUESTIONS

1. Explain the distinction underlying speculation and gambling. (Bombay, I. Com., 1939).
2. What is speculation? What part does it play in the determination of prices? (Punjab, Inter., 1952).
3. Contrast the economy of free supply with rationed food supply. How is the latter justified? (Raj., I. A., 1948).
4. Explain the difference between speculation and gambling. Discuss the economic consequences of speculation. (U. P., Inter. Com., 1943).

## CHAPTER 43

### MONEY

Money is the centre around which economic science clusters.—*Marshall*.

After discussing the theory of value, which is the essence of Exchange, we now pass on to the discussion of the various parts of Exchange Mechanism. Let us first take up the study of *Money*.

#### § 1. MEANING OF MONEY AND ITS FUNCTION, ETC.

#### Origin and History of Money

Barter, we learnt in an earlier chapter, has three shortcomings, namely, the improbability of double coincidence of wants; the complexity of exchanges, which are not made in terms of one single substance; and the need of some means of dividing and distributing valuable articles. To remove these defects men, at a very early stage, hit upon an *intermediate commodity* which began to be universally accepted in exchange for goods and services, which formed a basis for the measurement and comparison of the value of other commodities, and in which shape value could be sub-divided. Such an intermediate commodity is known as *Money*. //

The actual form assumed by money since its origin, has been extremely variable. In modern communities, money is represented by metallic coins and paper notes; and we often suppose that money has only these two forms. This supposition is wrong as is proved by the history of early times when money existed in various other forms<sup>1</sup>. In the hunting stage, furs and skins were employed as money. In the pastoral stage, the next higher stage of civilization, they were replaced by sheep and cattle. A passion for personal decoration being one of the most primitive and powerful instincts of the human race, ornaments also began to be circulated as money. In the agricultural stage, corn, *kowris*, etc., were used for the purpose. Later on, articles like cotton cloth, salt, etc., were tried. All of them were, however, found wanting in some respect or the other, and were finally replaced by gold and silver. The latest form of money is the paper money, which is decidedly its most convenient and the most economical type.)

#### Definition of Money

Different writers have defined 'money' (or 'currency') in different ways. It is defined sometimes narrowly and at others broadly. In the narrow sense, money refers to metallic coins only. In the broad sense, money signifies each and every form of the medium of exchange—metallic coins, currency notes, cheques and bills of exchange. Modern economists, however, steer the midway and define money as a *commodity which is generally acceptable in final payment of dues*. Ely de-

<sup>1</sup> See Ridgeway, *The Origin of Metallic Currency and Weight Standards*; Powers, *The Tribes of California*; Powel, *Wanderings in a Wild Country*, etc.



defines money as "anything that passes freely from hand to hand as a medium of exchange and is generally received in final discharge of debts."<sup>2</sup> According to this definition money includes metallic money and paper notes.

The student should also be aware of another term, namely, *currency*. Money and currency are interchangeable terms. All the things *current* as money constitute 'Currency'.

Diagram 42 on the next page illustrates the meaning of the term money. The smallest circle represents money in the narrow sense ; the bigger circle, in the proper sense ; and the biggest circle, in the broad sense.

According to this definition, *cheques* are not money. They are not legal tender and may not be accepted from persons little known or of doubtful credit. As such they do not pass freely from hand to hand and are not money. The same is true of *Hundis*. *Currency Notes*, on the other hand, are legal tender and are usually issued by authorities of unimpeachable soundness. Consequently they are freely acceptable and are money. *Pice* are legal tender to the extent of Re. 1 only. They are not acceptable freely after that limit partly because they lose their legal tender character and partly because they become inconvenient ; and consequently cease to be money after that point.

### Functions of Money

Money performs four main functions<sup>3</sup> which are as follows :

(1) *Common Medium of Exchange*. The fundamental function of money is to act as a common medium of exchange. The significance of the word 'medium' is that it becomes an intermediate thing in transaction between the producers and consumers of any and every article.<sup>4</sup> Goods instead of being exchanged directly for other goods, as under barter economy, are bought with and sold for money. Money thus becomes a universal tool for making exchanges. It is freely acceptable in exchange for all other commodities ; and its owner is able to get for it anything he likes without any inconvenience. This is the primary, function of money, other functions having been derived from it. It is

<sup>2</sup> Robertson defines money as a commodity which is used to denote anything which is widely accepted in payment for goods or in discharge of other kinds of business obligation. See Robertson, *Money*. J. M. Keynes, a very brilliant monetary economist, says, "Money is that by the delivery of which debt contracts and price contracts are discharged and in the shape of which general purchasing power is held."—J. M. Keynes, *Treatise on Money*, Vol. I.

<sup>3</sup> Money is a matter of functions four,

A medium a measure, a standard, a store.

<sup>4</sup> Walker, *Political Economy*, p. 122.

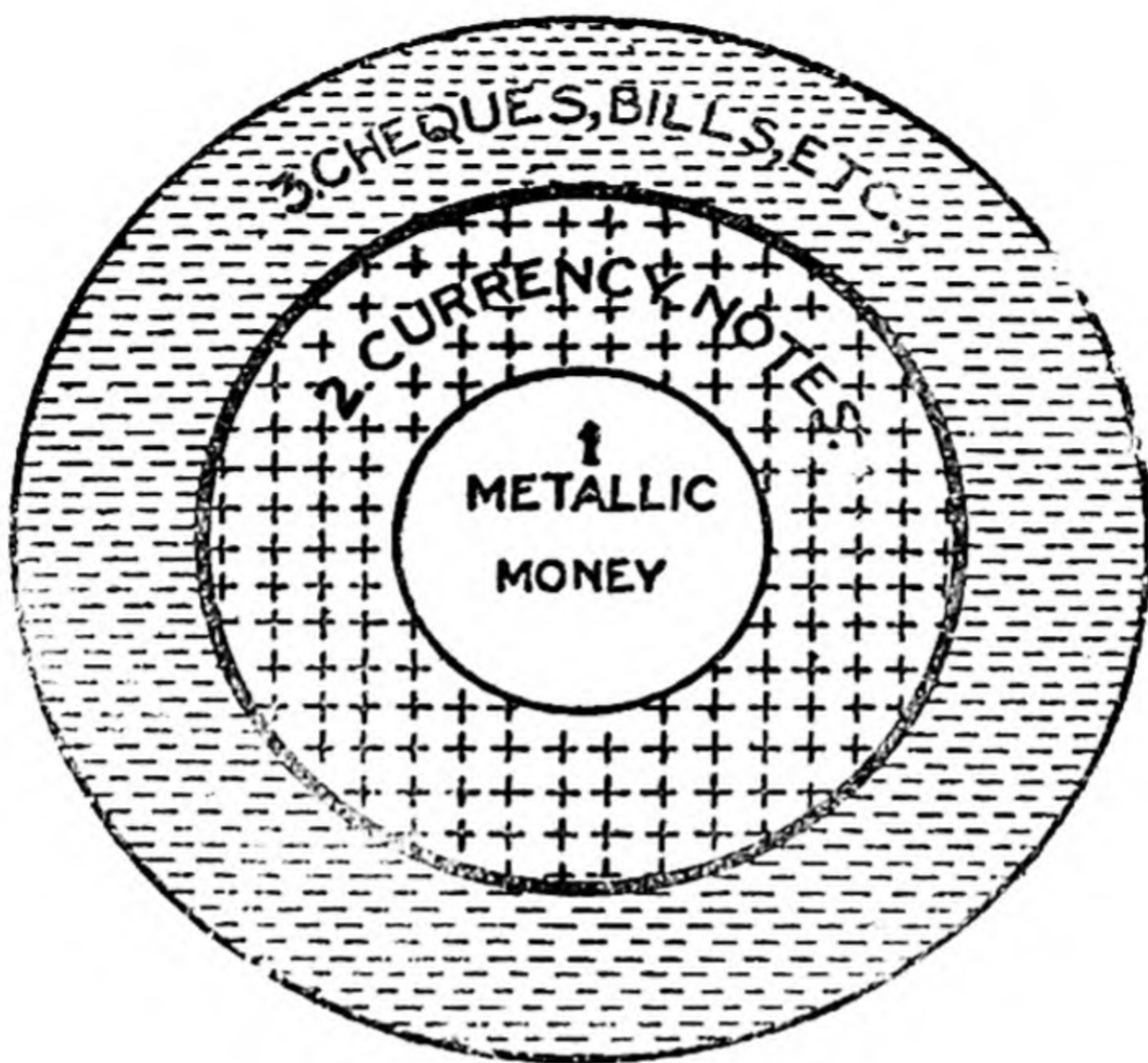


Fig. 42. Illustrating the scope of the term "Money."<sup>5</sup>  
 [NOTE—Circles 1 + 2 constitute money]

essentially *the Money function*.<sup>\*</sup> Whatever performs this function, is money. This function removes the necessity of the double coincidence of wants, which is felt under the barter system.

(2) *A Common Measure of Value.* The first function of money has for its natural corollary the second function, namely, to act as a common measure of value. When persons become used to exchange all the things for one particular commodity (money), they begin to measure the values of all the articles in the terms of latter alone. Just as we measure cloth in terms of yard and gold in terms of tolas, similarly we measure the value of all commodities in terms of money. Consequently all exchanges are calculated and adjusted by a comparison of the money values of the things exchanged. Money thus becomes a common measure of value.

(3) *Store of Value.* The third function of money is to enable its owner to preserve value in this shape for a long period, without

<sup>5</sup> Students may remember the following :

In *narrow* sense, Money = Metallic Money.

In *wide* sense, Money = Metallic Money + Paper Money + Bills of Exchange, Cheques, etc.

In *proper* sense, Money = Metallic Money + Paper Money.



any fear of loss.<sup>6</sup> Metallic money wears out very slowly and is an ideal store of value. Paper notes do not fulfil this function very well.

The storing of value in the form of goods is not as convenient as in that of money, mainly because goods deteriorate through passage of time and their value fluctuates widely. Moreover, they occupy much space. Such difficulties do not arise in the case of money. Hence money has come to be recognised as the best form in which value can be stored. If the owner of money were to suffer loss by not exchanging it at once, much of its usefulness will, indeed, be lost.

(4) *A Standard of Deferred Payments.* In the economic society of today, loans are daily given and taken and the repayment is deferred or postponed to a future date. In such cases, it is only just that the borrower should return to the lender the same value which he had borrowed. This is possible only if lendings and borrowings are carried on in terms of money whose value remains fairly stable; and not in terms of other goods or services whose value is subject to wide and frequent fluctuations. Money thus becomes the measure by which the value of future payments is regulated.

*Money thus acts as a common medium of exchange, a common measure of value, a store of value and a standard of deferred payments.*

### Attributes of a Good Money Commodity

The commodity of which money is made has to be carefully selected so that money may fulfil its functions fairly well. An ideal money material should possess the following qualities<sup>7</sup>:

(1) *Utility or General Acceptability.* General acceptability is the very essence of money. Unless a person knows that the money which he accepts in exchange for his goods or services, will be taken without any objection by others as well, he will not accept it, i.e., it will cease to be current. In order to possess general acceptability a commodity should have some intrinsic utility independent of its value for monetary purpose. Gold and silver are generally acceptable to all without any hesitation because they are for ornamental and other purposes and can be easily sold as bullion,<sup>8</sup> besides being used for monetary purposes.

(2) *Portability.* A commodity fit to be used as money must be such that it can be easily and cheaply transported from one place to

6 When we speak of value being stored in money, we do not imply that value is something intrinsic in money; we mean that money is a durable thing and that it is always saleable.—Turner, *Introduction to Economics*, p. 202.

7 The chief qualities are Cogniscibility, Utility, Portability, Durability, Indestructibility, Stability, Homogeneity. The first letters of these terms make "CUP, DISH." By this formula, these attributes can be easily remembered. Malleability is another quality, which may be added in the end as the eighth attribute.

8 Some students may think that paper, of which paper note is made, does not possess any utility independent of its value as money; hence it should not be generally acceptable. But in actual practice it is not exactly so. It must be remembered by them that certain cash or gold resources or securities



the other. In other words, it must possess high value in small bulk. Precious metals possess this quality. In the case of oxen and grain, a small value occupies a large bulk and weight; hence they are unsuited as money commodity.

(3) *Indestructibility or Durability.* As money is to be passed about in trade and kept in reserve, it must not be subject to easy deterioration, either in itself or as a result of wear and tear. "It must not evaporate like alcohol, nor putrefy like animal substance, nor decay like wood, nor rust like iron. Destructible articles, such as eggs, dried cod fish, cattle or oil have certainly been used as currency; but what is treated as money one day must soon afterwards be eaten up"<sup>9</sup>. Gold coins are very lasting; each of them takes about 8,000 years to wear out completely. Silver coins are not equally lasting but wear out fairly slowly. As such gold and silver are considered to be excellent money commodities.

(4) *Homogeneity.* All portions or specimens of the substance used as money should be homogeneous, that is, of the same quality, so that equal weights have exactly the same value. In order that a commodity may be used as a measure of value, it is essential that its units are similar in all respects. Gold and silver are of the same quality throughout; their various parts are similar in chemical and physical composition, and their consistency is the same throughout the mass.

✓ (5) *Divisibility.* The money material should be capable of division; and the aggregate value of the mass after division should be almost exactly the same as before. If we use diamond as money and perchance it drops from our hand and breaks, we will suffer enormous loss. This is not the case with precious metals. Their portions can be melted and remelted together any number of times without much loss.

(6) *Malleability.* The money material should be capable of being melted, beaten and given convenient shapes. It should be neither too hard nor too soft. If the former, it cannot be easily coined; if the latter, it would not last long. It should also possess the attribute of *impressionability* so that it may easily receive the impressions.

(7) *Cogniscibility.* By it we mean the capability of a substance for being easily recognised and distinguished from all other substances. As a medium of exchange, money has to be continually handed about and it will cause great inconvenience if every person receiving it were to scrutinize, weigh and test it. It should have certain distinct marks which nobody can mistake. Gold and silver are at once recognized by their distinctive colour, metallic and heavy weight for small bulk, and, as such, satisfy this condition admirably.

(8) *Stability of Value.* Money should not be subject to fluctuations in value. Fluctuating standard of value is just like a changing yard or seer. The value of a material which is used to measure the value of all the other materials, must be stable.

always back the notes; so that the intrinsic value of notes is to be measured by the resources backing them.

<sup>9</sup> W. S. Jevons, *op. cit.*, pp. 36-37.



People employ money as a standard of value for long period contracts ; and they often pay as much money as they had borrowed after some time. Hence a change in the value of money over a long period inflicts injury on some section of society. Fluctuations in the value of money at any particular time are also injurious. If a labourer, who has earned eight annas today to be spent tomorrow, finds in the meantime its value (that is, purchasing power) reduced by half, he would suffer serious loss.

The value of gold remains, more or less, stable as its yearly output is small compared with the great quantity already in existence. But the value of silver is not so stable. In recent years, however, the value of gold has been fluctuating frequently.

*The ideal money commodity should, as such, possess utility, portability, durability, homogeneity, divisibility, malleability, cogniscibility and stability of value.*

Gold and silver known together as precious metals, possess all these qualities and are, therefore, universally used for coining purposes. Brass, copper, nickel, etc., are used for coining small coins because if made of precious metals, they would be too small and microscopic.

### Classification of Money

(A) *Metallic and Paper Money.* Money may be classified into two simple classes : (1) The money printed on, or made of, metal, is called metallic money, and has an intrinsic value independent of its monetary value and (2) the money printed on paper, called paper money, e.g., the Reserve Bank Note. It has no intrinsic value other than its value as a monetary unit.<sup>10</sup>

(B) *Limited and Unlimited Legal Tender.* Money is always legal tender but the extent to which it is legal tender differs. The degree of its legal tender character may, therefore, be regarded as another stand-point of its classification.

By legal tender is meant the money which a creditor is, by law, bound to accept in discharge of debts. A refusal on the part of the creditor to accept it, as such, amounts to a legal offence punishable by law. According to our definition of money, a commodity called money must be *generally acceptable*. This can happen only if it is legal tender. Hence money is always legal tender; and anything which is legal tender is money. A commodity which is not legal tender cannot be regarded as money.

Money may be *limited* legal tender or *unlimited* legal tender. The unlimited legal tender is the money which can be legally tendered or given by the debtor to his creditor to any extent whatsoever. In India rupees and eight-anna bits are unlimited legal tender ; so also are the Reserve Bank notes. Limited legal tender, on the other hand,

<sup>10</sup> But we may regard the reserve behind it as representing its *intrinsic worth* as said above.



is the money which is tenderable only up to a limited extent. In our country four-anna, two-anna and one-anna pieces and pice and pies are limited legal tender.

### Importance of Money

Money has always been held in high esteem and the influence of pecuniary calculus upon ethical standards has been very definite. As Horace wrote—

All things human and divine, renown,  
Honour and worth, at money's shrine go down.

Pope similarly writes—

There London's voice, get money, money still,  
And then let virtue follow if she will, L

Prof Davenport gives the following impressive description of the social importance of money : More and more human efforts, human interest and desires and ambitions fall under the common denomination of money. Health is easier for him who has the wherewithal to pay for goods, foods and medicines, to travel and employ good nursing and to command capable physicians and efficient surgeons. And in their degree also, love and pity, respect and peace are bought and sold upon the market. All economic comparisons are made in money terms, not in terms of beauty or of artistic merit or of moral deserving.

The economic importance of money eclipses its social importance. A chemist has his delicate balance for measurement; the physicist has his finely graduated rule; the economist similarly employs money as a rough measure. The whole economic science is based on money; economic motives and activities are measured by it.

While studying Consumption, we take the help of money at every stage. We arrange the items of our expenditure in order of their utility which is measured with the measuring-rod of money. The urgency of our wants, the satisfaction derived from the consumption of a commodity and such other motives are measured by money.

Production is greatly facilitated by the use of money. The modern large-scale production is based on division of labour, which, in its turn, is the gift of the introduction of money.

Under Exchange, the importance of money shows itself most prominently. The old barter economy was characterized by serious shortcomings, to remove which men had to hit upon a universal "go between" in exchange of commodities. Nowadays almost all the transactions are carried on in terms of money.

Money plays an important role in the distribution of wealth and income of a group of co-operative agents of production. The share of various agents is determined and paid in terms of money. The distribution of social energy amongst the various forms of enterprises takes place through the medium of money. Whenever any business shows high profits, people begin to invest money in it.



Indeed, in every phase of Economics, money makes its appearance with superb prominence. Economic science, Marshall aptly remarks, clusters round money.

## § 2. METALLIC MONEY

### Coins

In modern times, metallic money takes the shape of coins. In primitive days, precious metals in their rude and uncoined form were used for this purpose. This was very inconvenient ; money had to be weighed and assayed each time an exchange was effected. Hence, the system of shaped pieces of the metal, whose weight and fineness were certified by a mark or stamp, came into vogue. This form of money, however, was open to clipping, (*i.e.*, cutting away of the small particles of the metals) and abrasion (*i.e.*, the practice of putting a large number of coins into a bag and shaking it so as to remove small fragments of the metal). The next stage, therefore, was marked by the advent of the coin, *a piece of metal of particular shape bearing a seal of a certain weight and fineness*. After some time the edges of these coins began to be milled and impressed with a complex and artistic design so as to make counterfeiting difficult. Thus the modern coin came into being. Coins have been defined as *ingots of which the weight and the fineness are certified by the integrity of design impressed upon the surfaces of metal*.<sup>11</sup>

The best form of coins is one whose design takes into consideration the following four points : (1) the prevention of counterfeiting ; (2) the prevention of the fraudulent removal of metal from the coin ; (3) the reduction of the loss of metal by legitimate wear and tear ; (4) the making of the coin an artistic and historical monument of the state issuing it and the people using it.

The art and practice of making coins is known as *coinage*. In the modern society it is the function of the State. The place where coins are made is called a *mint*.

### Free and Limited Coinage

Coinage may be *free or limited*. If mints are made open to the public, *i. e.*, if the public has the privilege and right (or is free) to take metal to the mint and get it converted into coins of the realm, the system is called *free coinage*. Before September 1931, when the United Kingdom was on gold standard, there was free coinage system in that country. In India mints were closed to the public in 1893 and since then they have never been opened to it.

The Government Mint may or may not charge something for minting coins. When the Government reserves the right of making coins, so that no member of the public is allowed to take metal to the mint and get it converted into coins, the system is called the *limited coinage*. In India since 1893 and in the United Kingdom since 1931, limited coinage system is in force.<sup>12</sup>

<sup>11</sup> W. S. Jevons, *Money and the Mechanism of Exchange*, p. 57.

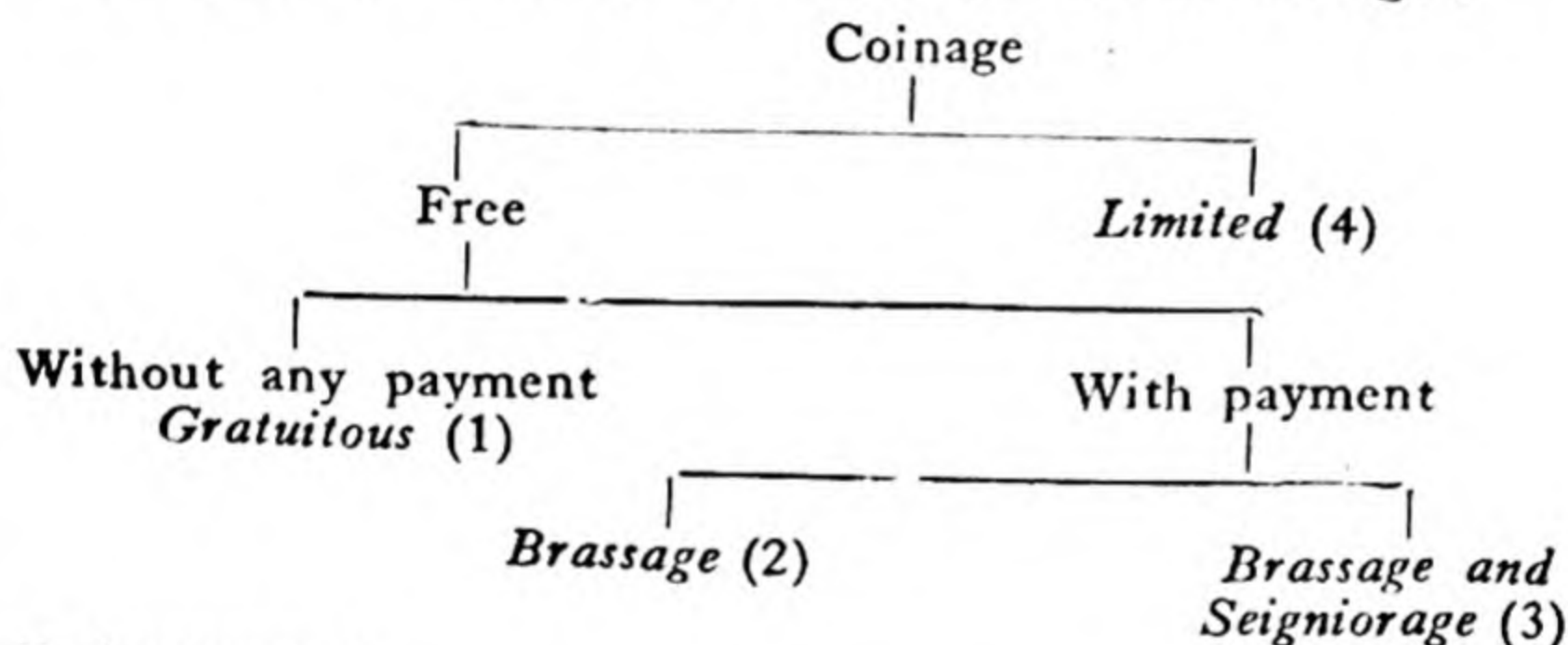
<sup>12</sup> Students should not confuse between *limited legal tender* and *limited coinage*.

## Gratuitous Coinage, Brassage and Seigniorage

Free coinage does not necessarily mean that the state converts metal into coins free of any charge. It may or may not do so. When it does not make any such charge, the coinage is said to be *gratuitous*. Where the Government levies a charge for coinage just equal to the cost of minting the coins, the charge is called *mintage* or *brassage*. If the Government charges something over and above the cost of minting, the additional charge so made is called *Signiorage*.<sup>13</sup>

*Illustration.* Suppose there is free coinage in any particular country. If you give one ounce of gold and get it converted into coins free of charge, the coinage is gratuitous. But if the cost of minting is 1 per cent and the minting charges have to be paid to this extent, then 1 per cent charge is the brassage or mintage. If the State charges 3 per cent in place of 1 per cent for minting, 2 per cent additional charge is seigniorage.

These three systems of coinage are to be found only in the case of free coinage and not in the case of limited coinage. The following chart gives the consequential four systems of coinage :



## Debasement

The reduction of the weight, or fineness, or both, of the metal contained in a coin is called debasement.<sup>14</sup> Debasement through the reduction in the fineness of metal can generally be practised only by the Government. Weight can be reduced by others as well. The following are the chief methods adopted for this purpose :

- (1) *Clipping*, i.e., the cutting away of small portions from the edges of the coins.
- (2) *Sweating*, i.e., the reduction of the quantity of the metal in the coin by the action of corrosive chemicals.
- (3) *Abrasion*, i.e., the practice of shaking up the coins in a bag and then by removing minute particles of the metal.

<sup>13</sup> When the Government makes a profit out of the coinage by fixing a low legal tender, the amount taken in addition to the cost of coinage is called *seigniorage*.—Penson, *Op. Cit.*, P. I, pp. 122-123.



### Standard and Token Coins

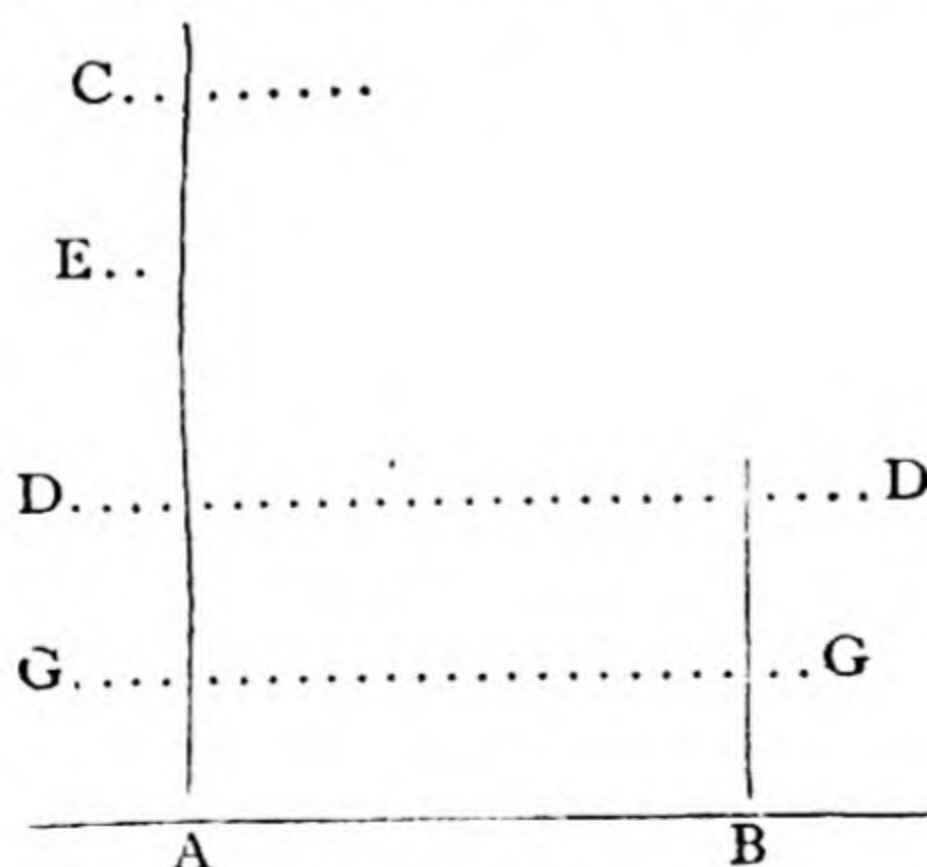
A *standard coin* is one whose face value is equal to its intrinsic value. It is the principal money of the realm, is unlimited legal tender and is subject to free coinage. Since its face value and intrinsic value are the same it is also called the '*full-bodied coin*.'

A *token coin*, on the other hand, is the one whose face value is greater than its intrinsic value. It is the subsidiary money, is limited legal tender and is subject to limited coinage. Token coins are variously styled as the *fiat coins or money* since their value depends, not on their intrinsic worth, but on the order of the State.

The following table shows the difference between standard and token coins :

Standard Coins	Token Coins
1. They are the principal money.	1. They are the subsidiary money.
2. Their face value is equal to intrinsic value.	2. Their face value exceeds intrinsic value.
3. They are unlimited legal tender.	3. They are limited legal tender.
4. They are open to free coinage.	4. They are open to limited coinage.

14 It has sometimes happened, as in Tudor times, that the Sovereign contained less than the standard amount of precious metal. This difference between the standard and real value is called debasement.



Let AC = Nominal value of the coin.  
 AD = Legal amount of metal in the coin.  
 AG = Actual amount of metal in the coin.  
 CE = Cost of minting the coin.  
 Then CE = Brassage.  
 ED = Seigniorage.  
 DG = Debasement.

Before September 1931, the gold sovereign in the United Kingdom was the standard coin of that country. But in September 1931 she went off gold, and paper-pound sterling replaced the gold sovereign. In India, there is no standard coin in the strict sense of the term. Her principal coin is the rupee which is standard money in so far as it is the principal money of the realm and is unlimited legal tender; and also token money inasmuch as its face value is greater than intrinsic value; and it is subject to limited coinage. Because of its hybrid character, it has been well styled as the "*token standard*". Some economists, however, like to call it *the standard money* of India for "as long as the main currency is in rupees, all contracts are made and taxes calculated in rupees, and rupees, and rupees are the legal tender to any amount, the rupee is really the standard."

### § 3. PAPER MONEY

In the modern state, we find considerable quantity of paper money circulating side by side with metallic money. The term paper money refers to Government or Bank notes which pass freely from hand to hand. Cheques and bills of exchange are not included in paper money.

The real nature of paper money was well expressed by Ricardo when he said that the whole charge for paper money may be considered as seigniorage. Though it has no intrinsic value, yet by limiting its quantity, its value in exchange is made as great as an equal denomination of coin or bullion in that coin. It is not necessary that paper money should be payable in metallic coins to secure its value; it is only necessary that its quantity should be regulated according to the value of the metal which is declared to be the standard.

### Advantages of Paper Money

Paper money is becoming increasingly more popular because of the many advantages that it possesses: (1) It is very light and handy and, therefore, *can be easily and cheaply carried over long distances*. This advantage becomes marked when large sums have to be paid to somebody far away. (2) *It is very economical*. The cost of making it is very small. A sheet of paper and a printing press enable the Government to print money worth lacs and crores of rupees. Compare it with the great cost involved in digging the metal, transporting it to the mint and coining it, which the metallic money necessarily involves. (3) It contains *large value in a small volume*. (4) *In times of national emergency* and financial stringency, the Government need not find itself handicapped by lack of money material. It can set the printing press to work and print as much money as is necessary.

### Disadvantages of Paper Money

Paper money suffers from two main demerits: (1) The Government, if they so wish, may go on printing notes to such an extent that their value goes down drastically. This, however, can be checked if the issue of paper is kept under the control of a Central or Reserve Bank independent of undue Government influence. (2) Because of its zero intrinsic value, its circulation is considerably res-



stricted. This fear, however, has proved to be false. Even in a country like India where the majority of the people are ignorant and suspicious, paper money is quite popular and is used in the normal course of things. So long as the credit of the issuing authority is unimpeachable and its word as good as gold, there need not be any restriction to its circulation.

### **Convertible and Inconvertible Paper Money**

*Convertible or Redeemable Paper Money.* Paper money may be convertible or inconvertible. It is convertible when it can be converted into standard metallic money of the land on demand. For instance, the Reserve Bank notes bear the promise to pay the bearer on demand the sum of a certain number of rupees at any office of issue, a promise which is always fulfilled. The Reserve Bank notes are, as such, convertible.

In order to guarantee this convertibility, the issuing authority keeps a certain amount of bullion and metallic coins in "*reserve*". All the notes are not simultaneously presented for encashment. The issuing authority knows by experience the percentage of the total notes which are presented for the purpose at any particular time. It keeps the same percentage of bullion and coins in reserve. The portion of the total notes issued, which is covered with the 'reserve', is known as *Covered Issue*, the rest being called *Uncovered or Fiduciary Issue*.

If a 100% reserve is kept behind paper money, it is then called *Representative Money*. But such money is not of great advantage since real advantage of paper money lies in the economy of precious metals.

*Inconvertible or Irredeemable Paper Money.* Inconvertible notes are not converted into standard metallic money by the issuing authority. Even then they may circulate by the sheer force of the authority of the Government. Hence they are sometimes called *Fiat Money*.

If the quality of the inconvertible paper money does not exceed the legitimate business and industrial requirements, there is no reason why they should not function efficiently. But unfortunately the issuing authorities begin to misuse their power and issue money in unlimited quantity, so much so that the notes become almost worthless paper. This happened in many European countries during the last Great War. For example, the value of the German Reichsmark deteriorated so much that it became less than the value of the paper on which it was printed. *Greenbacks* in America during the American Civil War and French *Assignats* during the French Revolution are other examples of inconvertible paper money. During World War II the Government of India began to issue one-rupee notes which are inconvertible.

### **INTERMEDIATE QUESTIONS**

1. Explain (a) Standard Money, (b) Token Money, and (c) Legal Tender. What are the qualities of Standard Money? (Andhra, I. A., 1950).
2. Explain the various forms of paper money and the part played by them in the monetary system of a country. How far does paper money perform the functions of money satisfactorily? (Bombay, I. A., 1940).



3. Explain and classify the functions of Money and show how production and exchange are greatly facilitated by the use of money. (Karachi, I. Com., 1952).

4. Define barter. Explain with examples the inconveniences of barter. How have these inconveniences been avoided by the use of money? (M. B., I. A., 1953).

5. Explain with examples the economic effects of the over-issue of paper money. (M. B., I. A., 1952).

6. Define the term money, and explain its chief functions in modern times. (M. B., I. Com., 1953).

7. Explain the functions of money and the forms it generally takes.. (Mysore, I. A., 1944).

8. State the merits and defects of paper currency. (Osmania, I. A., 1952).

9. Why is paper money being used instead of coins? What are its advantages and disadvantages? (Osmania, I. A., 1951).

10. Explain and classify the functions of money and show how production and exchange are greatly facilitated by the use of money. (Osmania, I. Com., 1952).

11. Describe the origin and growth of paper money. What are the causes of its wide prevalence today? (Patna, I. A., 1952).

12. What are the different kinds of medium of exchange we use, and what are the special advantages of each? (Patna, I. A., 1950).

13. Define money. What are its functions? (Patna, I. A., 1949).

14. Distinguish between and explain the principal forms of paper money. What are its advantages and disadvantages? (Patna, I. Com., 1952).

15. What are the chief functions of money? Explain them clearly. (Patna, I. Com., 1951).

16. Describe the advantages and disadvantages of paper currency. (Patna, I. Com., 1951).

17. What is money? What are the functions of money? (Punjab, Int., 1951).

18. Under what conditions does money cease to do its proper functions? Did such a situation ever arise in India? (Punjab Inter., 1949).

19. Define money and show how money economy makes an advance over the system of barter. Also mention the conditions under which money may become a source of embarrassment to the community. (Punjab, Inter., 1940).

20. Define money. Explain its functions and importance in the modern economic life. (Raj., I. A., 1953).

21. Explain the functions of money. Also enumerate kinds of money. (Raj., I. Com., 1953).

22. Narrate the advantages and disadvantages of paper money and point out whether convertibility of paper money has got any significance in present currency system. (Raj., I. Com., 1952).

23. Define money. Discuss in the light of your definition whether the following should be regarded as money: (a) an old rot rupee, (b) a Defence certificate for Rs. 10, (c) a five-tola gold bar, (d) one-rupee postal stamp. (Travancore, Int., 1953).

24. What is money? What are its functions? (Utkal, I. Com., 1962).

25. Describe the merits and demerits of Paper Money (Utkal, I. Com., 1951).



## CHAPTER 44

# MONETARY STANDARDS, VALUE OF MONEY AND GRESHAM'S LAW

Jevons certainly, and Edgeworth and Dr. Bowley probably, have also pursued something distinct from purchasing power of money, something which has to do with what they might describe as the value of money as such or, as Cournot called it, the *intrinsic value of money*. This is will-o' the wisp a circle squaring expedition which has given an elusive taint difficult to touch or catch, to the treatment of the Theory of Price Index Numbers tradition in England.—J. M. Keynes.

In the preceding chapter we discussed some elementary facts about money. Now we shall study the following monetary problems of an advanced nature : (1) Monetary Standards ; (2) Value of Money ; and (3) Gresham's Law. Gold Standard and Quantity Theory of Money have been treated in *Appendices* to this Chapter.

### § 1. MONETARY STANDARD

#### Definition of a Monetary Standard

The way in which the currency system of a country is controlled has vital effects on its economy. As such, the currency system should be controlled with a view to fulfil certain objective or standard calculated to maximise the welfare of the nation. Such an objective is known as Monetary or Currency Standard. The monetary standard has been defined as *the standard or object with reference to which the value of a currency unit is regulated*.<sup>1</sup>

In recent times a large number of standards has been devised and practised and serious attempts have been made to achieve nicety, precision and efficiency in currency management. The important types of monetary standards are Monometallism, Bimetallism and Limping Bimetallism.

#### Monometallism

A system of currency in which only one metal is used for the coinage of the standard or principal money is termed monometallism ; and the country having it is said to be a monometallist country. The metal used for this purpose is either gold or silver. No other metal has been found to be suitable for this purpose.

(a) *Gold Standard*. The monometallic standard in which gold is used for the coinage of standard money is known as *Gold Standard*. This had been the most popular monetary standard in the world in recent past. England was on gold standard till September 1931, but during that month, she gave up this standard or *she went off gold* as the phrase goes. The reader is referred to *Appendix I* to this chapter for a fuller discussion of the gold standard.

<sup>1</sup> B. R. Shenoy's Article, *A Classification of Currency Standards in the Indian Journal of Economics*, October 1936, is instructive in this connection



(b) *Silver Standard.* The monometallic standard in which silver is used for the coinage of standard money is known as *Silver Standard*. This standard is subject to capricious and wide fluctuations because of the enormous quantity of silver mined each year. As such, it has been practically abandoned over a major part of the world. China which clung to silver for a very long time eventually gave it up, and Hong Kong, following its lead, also abandoned it later. China left the silver standard on November 3, 1935, and Hong Kong, five days later.

### Bimetallism

Under bimetallism two metals, usually gold and silver, are simultaneously used for the coinage of the standard money. Both gold and silver coins are unlimited legal tender and the mint is open to both the metals. Both are minted alike into coins of similar names and denominations. The coins of one metal are convertible into the coins of another metal at a fixed rate. The essentials of bimetallism are : the existence of two kinds of standard money of two different metals ; the opening of the mint for both of them which are unlimited legal tender ; and the inter-convertibility of both of them at a fixed rate.

Bimetallism was once adopted in several countries of the world, but it was soon abandoned by them because a fixed ratio between the value of the two coins could not be maintained. If the supply of silver increased considerably it became cheaper in terms of gold : one gold coin began to command more than the fixed number of silver coins. If the quantity of gold, on the other hand, increased appreciably which was a rare occurrence, opposite results followed. On such occasions Gresham's Law<sup>2</sup> operated and bad money tended to drive good money out of circulation.<sup>3</sup>

The system was adopted by France in 1803 with express purpose of preventing the country from a shortage of money in case the supply of one metal was drastically curtailed. What happened in actual practice was that the metal whose supply was increasing considerably and which was, therefore, cheaper of the two, alone remained in circulation ; so that practically there was monometallism at any particular time. Thus as between 1803 and 1870 for about fifty years, France had a silver standard and for twenty-seven years, gold standard, France abandoned bimetallism in 1870.

<sup>2</sup> See Section 3 below.

<sup>3</sup> The chief arguments of bi-metallists are : (a) that the joint production of both metals would not vary so much as that of either of them ; (b) that the dual system would tend to steady prices ; and c) that the supply of gold is insufficient for the currency acquirements of all the countries of the world if universal monometallism were adopted. These arguments have not outweighed the following proved disadvantages of the bimetallic system : (a) the great difficulty of maintaining the mint ratio between the metals in face of constant fluctuations in the market ratio ; and (b) the operation of Gresham's Law in driving from circulation the underrated metal as soon as market prices diverge from the mint ratio, resulting in an alternating coinage of gold and silver.

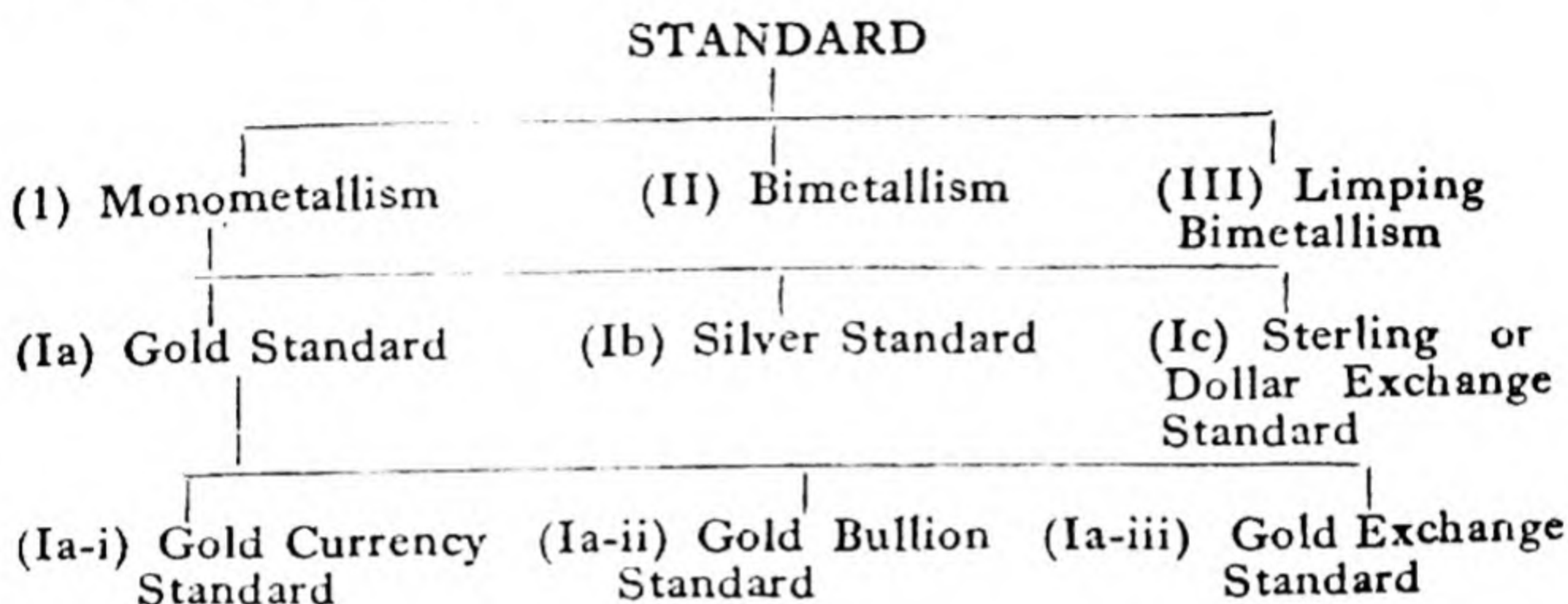


## The Limping Standard

The limping standard, or the limping bimetallism, is a partial form of bimetallism. Under the limping standard two metals, usually gold and silver, are unlimited legal tender but only one of them, invariably gold, is open to free coinage. This system existed in the United States of America and France before the Great War of 1914-18.

### § 2. GOLD STANDARD

In the preceding pages, we have described the chief types of the monetary standard. The following table gives a detailed classification of monetary standards<sup>1</sup>:



This classification is not very exhaustive but it serves our purpose quite well. We have already discussed Monometallism, Bimetallism, and Limping Bimetallism, and shall now study the subdivisions of Gold Standard, and the Sterling (or Dollar) Exchange Standard.

### Gold Standard

The gold standard is a monometallic standard under which only gold coins are declared to be standard coins, open to free coinage and being unlimited legal tender. Whether gold coins are in actual circulation or not, is not a material point. The currency notes are convertible into some declared form of gold. The gold standard is based on the implication that the value of the monetary unit shall be kept equal to the value of a given quantity of gold<sup>2</sup>. This is done by unlimited purchase and sale of gold at a fixed price.

<sup>1</sup> A more scientific and complete classification will be to put all these standards under the genus, *External Standards*. The following *Internal Standards* may, then be added to the table: Tabular Standard, Labour Standard and Cost Price Equilibrium Standard. For a thorough classification, see B. R. Sheroy, *Op. Cit.*

<sup>2</sup> A gold standard denotes a state of affairs in which a country keeps the value of its monetary unit and the value of a defined weight of gold at an equality with one another.—Robertson, *Money*, Chapter IV, Section 1.



The gold standard is of three types : gold currency standard, gold bullion standard and gold exchange standard.<sup>3</sup>

(i) *Gold Currency Standard.* Under the gold currency standard, the gold coins are put into actual circulation. Currency notes are convertible into these gold coins. It was essentially a pre-War reality when people believed that the existence of gold coins in circulation was an indispensable characteristic of gold standard. This idea has now been abandoned.

The technique of this standard is that the contents of the gold coin is fixed by law, and by the device of free coinage, the value of the coin and of the fixed amount of gold are kept at a parity. If at any time the value of coins in terms of gold goes up, or, what comes to the same thing, the value of gold in terms of coins goes down, people bring gold for coinage till the original parity is restored. On the other hand, if the value of coins in terms of gold goes down, or, what comes to the same thing, the value of gold in terms of coins increases, people begin to melt gold coins till the original parity is restored.

(ii) *Gold Bullion Standard.* Gold currency standard is an expensive standard since it requires the digging out of gold and its coinage. A more economical type of gold standard was, therefore, devised by monetary experts, which guaranteed the convertibility of currency notes into gold bullion, rather than gold coins, at a fixed rate. The gold currency thus disappeared and the national resources involved in coining the yellow metal were saved.

Under this standard the monetary authority is always prepared, on the one hand, to convert at least one important kind of money into uncoined gold at a fixed rate, and, on the other hand, to buy coined gold or money at a fixed rate.

(iii) *Gold Exchange Standard.* Gold bullion standard is an improvement over the gold currency standard, inasmuch as it avoids the trouble and expense of coinage, but labour has still to be spent in digging out gold. A still more economical standard has, therefore, been evolved which dispenses with the use of gold still further. For internal purposes, gold coins and bullion are not available from the monetary authority. For making payments to foreign countries, however, gold (or foreign currency) is available from the said authority at a rate fixed in terms of the currency of another country which has a gold standard (gold currency or gold bullion standard). Thus before September, 1931, when England was on gold standard, the Indian rupee was linked to the British currency at the rate of Re. 1 = 1s. 6d. Gold could not be had in exchange of rupees for internal purposes ; but for making foreign payments., gold (or foreign currency) was available at the rate of 1s. 6d. We then had gold exchange standard.

Under this standard, therefore, the currency of a country is not directly linked to gold but is indirectly based on it through the medium

3 In discussing the gold standards and its off-shoots, much material of my article *Pure and Applied Economics in India* (Mysore Economic Journal, Volume 24, No. 11, 1938) has been incorporated herein.



of the currency of some other country which has a direct gold standard. And by free purchase and sale of gold (or foreign currency or foreign exchanges), the monetary authority keeps the rate of exchange near about the fixed parity.

### **Sterling (or Dollar) Exchange Standard**

We have described above three types of one form of monometallic standard, namely, the gold standard. We shall now discuss sterling (or dollar) exchange standard. The silver standard has already been discussed.

If the currency of a country is linked to the currency of Great Britain or the United States of America or any other country, and the latter is not on gold, then we have the sterling or dollar on any other exchange standard.

For instance, before 1947 the rupee was linked to the sterling and the later was off gold. We had, therefore, the sterling exchange standard in India at that time.

Gold exchange standard and sterling exchange standard are often confused even by responsible writers. Students should clearly understand that in both of the standards, *i.e.*, gold exchange standard and sterling exchange standard, the value of currency of one country is fixed in terms of that of another; but in the first case the latter currency is on gold standard, while in the second case it is off gold.

## **§ 3. QUANTITY THEORY OF MONEY**

### **Quantity Theory of Money<sup>1</sup>**

The value, or purchasing power, of money depends in the first instance on the demand for and supply of money.

*Supply of Money.* The supply of a commodity means the quantity offered for sale. But it is not usual to speak of offering money for sale. This, however, is merely an accident of language. The money with which people offer to buy things and services is money offered for sale. The supply of money then is the quantity of it which people are wanting to lay out: that is, all the money they have in their possession, except what they are hoarding, or at least keeping by as a reserve for future contingencies. The supply of money, in short, is all the money *in circulation* at the time.

*The Demand for Money.* The demand for money consists of all the goods offered for sale. Every seller of goods is a buyer of money, and the goods he brings with him constitute his demand for money.

Now suppose the supply of money has increased and other

<sup>1</sup> A detailed statement of theory is not given here. Those who want to make a detailed study are advised to consult Chabani, *Indian Currency, Banking and Exchange*, Chapter II or Thomas, *Elements of Economics*. This theory has been criticised on various grounds and substitutive theories have been propounded, *e.g.*, the Cambridge Formula and the Keynesian Formula. See J. M. Keynes, *A Treatise on Money*, Volume I, Book III, and *A Tract on Monetary Reports*.



things remaining the same, prices have risen. The rise in prices will be in the ratio in which the quantity of money had increased. If money in circulation were doubled, prices would be doubled. If the quantity of money were to be reduced to half, prices would also decline to the same extent. As such the value of money, other things remaining the same, varies inversely as its quantity.<sup>5</sup>

*Quantity Theory of Money.* This is the celebrated Quantity Theory of Money. It states that every change in the quantity of money in circulation produces, *other things being equal*, a directly proportional change in the general price level or reverse proportional change in the value of money. If you increase or decrease the quantity of a commodity, its value will certainly fall or rise but not *proportionately*. In the case of money, however, if you increase or decrease its quantity, the change in its value will be proportionate, provided other things are equal.

*Other Things Being Equal.* This is an important phrase and means that this theory holds good only under certain hypothetical conditions. They are given below :

(1) *Volume of Trade.* The volume of trade determines the amount of money required by the country ; in other words, it determines the demands for money. The theory assumes that the value of trade remains the same. If it increases somehow, each unit of money will begin to be exchanged for more goods and services than before and its value will increase in spite of an increase in its quantity, and *vice versa*.

(2) *Credit Instruments.* Credit instruments sometimes act for money and serve their purpose very well. The quantity of credit instruments has the same relation to the general price level as money. The theory of assumes that the supply of credit instruments remains the same.

(3) *Velocity of Circulation.* A coin exchanges for goods and services a number of times and does the work of many coins and notes. Thus if a rupee is used for 100 transactions during a month, it has done the work of 100 rupees. The number of times a coin circulates is known as its "velocity". The effective quantity of money is equal to the actual quantity of money multiplied by its velocity. Changes in the velocity have the same effect on price level as changes in the quantity of money. The theory presumes that velocity remains the same.

*The Equation.* These relations have been expressed by Professor Irving Fisher as below :

If  $P$  = General Price — Level.

$M$  = Quantity of money in circulation.

$M'$  = Quantity of credit money in circulation.

$V$  = Velocity of  $M$ .

$V'$  = Velocity of  $M'$

then,  $P = MV + M'V'$

or,  $PT = MV + M'V'$

6 J. S. Mill, *Principles of Political Economy*, Book, III, Chapter VIII.



The theory assumes that  $T$ ,  $V$ ,  $M'$  and  $V'$  remain unchanged. Now if you increase  $M$ ,  $P$  will rise proportionately, and *vice versa*. The value of money depends upon its quantity : hence the name Quantity Theory of Money. In this sense, this theory becomes an obvious truism.

#### § 4. MEASUREMENT OF THE VALUE OF MONEY

Value of money is an abstract concept and cannot be measured directly.<sup>6</sup> But the general price level, or a composite price of things in general, which varies inversely with variations in the value of money, lends itself to easy measurement. General price level is measured by *General Price Index Numbers*. The general price level in a standard year is taken to be 100. Similar numbers for other years are calculated indicating a rise or fall, as the case may be, in the general price level. *The numbers which are meant to show variations in the General Price Level are known as General Price Index Numbers*. If the General Price Level rises, it is presumed that the value of money has proportionately fallen ; and *vice versa*.

*Construction of Index Number*. Price index numbers are constructed as below : (1) A list of goods and services is made such that they may reflect the variations in prices in goods and services in general. (2) A period, normal in character, is taken to be the basic period and serves as a standard for comparisons. (3) Prices for the period concerned are collected from representative localities at regular intervals and are averaged. The average gives the price of the commodity during the period concerned. (4) The price of a commodity during the basic period is taken to be 100, and the percentage price for the same commodity in the period concerned is found out by the simple rule of three. This is done with regard to each commodity. (5) All the percentage prices are then added up and divided by the number of items. This gives the *Index Number* for the period.

#### § 5. VALUE OF MONEY AND ITS FLUCTUATIONS

##### Meaning of the Value of Money

Just as the value of all the commodities and services is measured in terms of money, similarly the value of money is measured in terms of *goods and services in general*. By value of money, economists mean the amount of *goods and services in general*<sup>4</sup> which one unit of money can purchase ; in other words, its *general purchasing power*.

##### Value of Money and General Price Level

The amount of *goods and services in general* which one unit of money can purchase has been called above the value of money. The money price of one unit of *goods and commodities in general* is called the *General Price Level*.

<sup>6</sup> It cannot be directly measured because the composite character of the "general goods and services" makes their unitisation difficult and in many cases meaningless.

<sup>4</sup> "Goods and services in general" is not very expressive. It refers to that group of commodities and services which represents the entire mass of



General Price Level varies inversely with the value of money : if one rises, the other falls. It can be explained with reference to wheat which is being sold, say, at 2 seers a rupee. If the value of a rupee goes up to 4 seers of wheat, what happens to the value of wheat? It goes *down* : formerly it was 8 as. a seer but now it is only 4 annas a seer. In the same way it can be shown that if the value of money goes down, then value of wheat goes up. What is true of the value of wheat is also true of the value of *goods and services in general, i.e., general price level*.<sup>5</sup>

In the words of J. S. Mill, the value of a thing is what it will exchange for ; the value of money is what money will exchange for—the purchasing power of money. If prices are low, money will buy much of other things and is of high value ; if prices are high, it will buy little of other things and is of low value. The value of money varies inversely with general prices—falling as they rise, and rising as they fall. |

### Appreciation and Depreciation in the Value of Money

The value of money, like that of any other commodity, is subject to fluctuations. A rise in the value of money (*i.e.*, its purchasing power) is known as *depreciation*; and a fall, as *appreciation*.

Suppose the value of money in terms of wheat was 3 seers a rupee on 1st April, 1957. If on 5th April, 1957, one unit of money can purchase 5 seers of wheat, its value has *appreciated*; on the other hand, if it can purchase only 3 seers, its value has *depreciated*.

*Depreciation* must not be confused with *deterioration* or *debasement*. *Deterioration* means reduction in the metallic content of a coin through wear and tear ; and *debasement* signifies deliberate reduction in the metallic content of the coin or in the fineness of the metal. Depreciation, on the other hand, means a decrease in the value of money as a result of variation in the demand for and supply of money.

### Inflation, Deflation and Reflation

The volume of currency should be determined with reference to the legitimate demand for currency in the country. If this is not done and the supply of currency exceeds, or falls short of, the demand for it, grave repercussions are likely to follow.

Sometimes it so happens that the Government deliberately increase the volume of currency in a period of financial stringency till it exceeds the legitimate currency requirements of the country. *Such deliberate increase in the volume of currency in excess of the legitimate demand for it, is called inflation*. Inflation depreciates the value of money and raises the general price level. During the Great War I,

commodities and services. This is called the "representative datum." The value of money is measured in terms of this composite mass.

J. M. Keynes, however, maintains that the concepts of "*goods and services in general*" and its counterpart "*General Price Level*" are unreal myths. See Keynes, *A Treatise on Money*, Volume I, Chapter VI.

<sup>5</sup> J. S. Mill *Principles of Political Economy*, p. 229.



many countries inflated their currency. The inflation in Germany was so tremendous that the value of Reichsmark became lower than the value of the paper on which it was printed. It was called 'hyperinflation.'

*Deflation refers to the contraction of currency to such an extent that it falls short of the demand for it.* Deflation appreciates the value of money and depresses the general price level. After the Great War I, many countries deflated currency considerably.

The post-War (I) deflation had to be corrected by a policy of controlled inflation with a view to tone up the depressed world economy. *An expansion of currency with a view to correct the effects of post deflation, is often termed as reflation.*

### **Effects of Appreciation and Depreciation**

The appreciation and depreciation of currency cause uncalled for fluctuations in the value of money and price levels, and distort and damage the economic mechanism by disturbing the even basis of trade and industry, and by benefiting some classes at the expense of others. These effects can be discussed under three heads : (a) effects on industrialists and businessmen; (b) effects on consumers; and (c) effects on debtors and creditors.

*Effects of Inflation or Depreciation of Money or Rising Prices.*  
 (a) During the period of rising prices, industrialists make huge profits. Their (money) cost of production remains more or less the same—and even if it rises, it rises very slowly—while the prices shoot up tremendously. Large profits are, therefore, earned. This is also the period of rapid industrial expansion as the profits earned are invested in industries by the industrialists. High profits may lead to speculation which entails much loss when the inevitable crash comes. *Businessmen* also earn increased profits as people have money in their pockets and purchase goods freely. The period of inflation thus coincides with high profits, industrial expansion, increased employment and general prosperity. (b) *Debtors gain and creditors lose.* Debtors pay to their creditors the exact amount of money they had borrowed (plus interest); but the prices having gone up, this amount cannot purchase as much goods and services as it could when the loan was given. Creditors, therefore, get less purchasing power than what they had parted with. (c) *Consumers suffer* to the extent that they are required to pay higher prices than before. Industrialists and others, whose incomes increase due to rising prices, do not mind it, but the workers, capitalists and landlords whose incomes are fixed, suffer since their income loses a part of its purchasing power.

*Effects of Deflation or Appreciation of Money or Falling Prices.*  
 The effects of falling prices are just the reverse of those described above. (a) The profits of the industrialists shrink and depression sets in. As people do not have sufficient money, they reduce their purchases, and factories have, therefore, to be closed down. The outlook becomes pessimistic and unemployment increases. (b) *Creditors gain while debtors lose.* Debtors pay the amount of money that



they had borrowed but as the prices are low at the time of payment, they pay more than what they had borrowed in terms of goods and services. (c) *Consumers benefit* as they pay for the goods they consume lower prices than before. This is particularly true of labourers, landlords and capitalists whose incomes are fixed and do not shrink; but not so much of industrialists whose incomes are considerably reduced.

### § 6. GRESHAM'S LAW

Now we come to an interesting monetary law, known as *Gresham's Law*. During the reign of Queen Elizabeth, English coins had either deteriorated through wear and tear or had been debased by unscrupulous persons. New coins were issued over and over again to improve the matters but they disappeared as soon as they made appearance. The Queen sought the advice of Sir Thomas Gresham in the matter. Sir Thomas opined that *bad money always drives good money out of circulation*; and currency could be improved only by withdrawing all the bad coins from circulation. *The tendency of bad money to drive good money out of circulation is known as Gresham's Law.*

#### Scope of the Law

This law is applicable in the following three cases :

(1) *If coins of the same metal but of varying weight, or quality, or both, circulate together at the same nominal value, the worse coins will tend to drive the better ones from circulation.* The good coins disappear because some of them are kept back from circulation or hoarded, while others are melted down, exported or fraudulently depreciated in weight. Most men, although they gain nothing by it, have a lurking inclination to keep a brand new coin and give out the depreciated or debased coin when both have the same value. Those who hoard money prefer good coins for hoarding since their metallic content is greater than that of bad coins. Those who want to melt coins, similarly prefer the good coins for the same reason. Again, those who want to pay foreigners, export good and full-weighted coins, and not bad ones, because foreigners value coins according to their weight. Finally, fraudulent persons, with very slight risk of detection and with certain profit to themselves, clip and sweat the newer coins so as to reduce them to the general level of those in circulation.

(2) *If coins of two precious metals be circulated at a fixed ratio of exchange with one another, the over-valued metal (at the mint) will tend to drive the under-valued metal from circulation.* Suppose in a country two kinds of coins are current—'G', gold coins, and 'S', silver coins at the mint rate of  $1G=10S$ . Suppose the market value of gold and silver changes in such a manner that the market value of these coins becomes  $1G=15S$ . In this case, then, the mint overvalues the silver coin and under-values the gold coin. Consequently gold coins will disappear from circulation and will be hoarded or melted or exported.

6 A very good illustration of this type is provided by the Japanese currency at the time of the treaty of 1858 between Great Britain, United States of America and Japan. The most valuable Japanese coin was *Koban*. It was passing current in Japan for four silver *Itzibus*, but was worth in English money about



(3) *If an inconvertible paper currency be issued in excess of the normal requirements of the country, it will tend to drive precious metals from circulation.* An abnormal increase in the amount of inconvertible paper currency, which is obviously bad money, tends to drive metallic coins, which are good money, from circulation. Metallic coins are either exported or hoarded or melted down<sup>7</sup>.

### Limitations of the Law

The Law has three limitations :

(1) It is applicable to standard money whose face value is equal to its intrinsic value, and to paper currency only. It is not applicable to token coins. Since the face value of the token coins is higher than their intrinsic value, they are bad coins as against standard coins. But there is no competition between the standard and token coins since they satisfy altogether different types of currency demands. As such, though token coins are bad coins, they do not displace standard coins.

(2) If the total currency of the country does not exceed her normal and legitimate requirements, the law will not operate ; since all the coins, good, bad or indifferent, are needed for circulation, the value of each coin as coin will be higher than its value as bullion. But if the total currency exceeds the legitimate requirements good coins will be withdrawn to the extent of the excess.

(3) Bad money will fail to drive good money out of circulation in case the community as a whole refuses to accept and to circulate bad money for exchange purposes in view of its worthlessness.

### INTERMEDIATE QUESTIONS

1. Examine the Quantity Theory of Money and state how far the theory can be modified. (Andhra, I. A., 1950).

2. Discuss the different types of Gold Standard, explaining its advantages as well as disadvantages. (Andhra, I. A., 1950).

3. State and discuss Gresham's Law. Explain the various cases where it operates and indicate its limitations. (Bombay, I. A., 1940).

4. Write a note on Gresham's Law. (M. B., I. A., 1952).

5. Write a short note on Gold Standard. Patna, I. Com., 1950).

6. Write short notes on (a) Gresham's Law and its Limitations, and (b) Gold Exchange Standard. (Patna, I Com., 1949).

16s. 5d. whereas the silver *Itzebus* was equal only to about 1s. 4d. Thus the Japanese were estimating their gold money at about one-third as estimated according to the relative values of the metals in other parts of the world. The earliest European traders trebled their money by buying up the *Kobang* at the native rate and selling it abroad, until the native, perceiving what was being done, withdrew from circulation the remainder of gold. See Laughlin, *Principles of Money*, for such interesting historical examples.

7 Exports of metals, it may be noted, take place automatically. Abnormal increase in the volume of currency raises prices all round. Other countries find it profitable to sell their goods in this country, resulting in an export of precious metals, to pay for the imports of goods. The ensuing scarcity of coins encourages hoarding, thus reducing the stock of gold to circulation drastically.

7. What are Index Numbers? How are they constructed? (Poona, I. A., 1950).
8. Explain the Quantity Theory of Money. (Poona, I. A., 1950).
9. What do you understand by the Gold Standard? Explain its different forms. (Poona, I. A., 1949).
10. How is the value of money determined? (Raj., I. Com., 1951).
11. State and explain Gresham's Law. Consider its application to paper currency. (Travancore, Int., 1943).
12. What is meant by the term "value of money"? "The value of money is determined by the demand for and the supply of money." Explain. (I. A., 1951).



## CHAPTER 45

### CREDIT AND CREDIT INSTRUMENTS

Credit is a consequence not a cause, 'tis the oil of the wheel, the marrow of the bones, the blood in the veins, and the spirit in the breast of all Trade and Commerce in the world.—*Defoe*.

#### § 1. CREDIT

##### Meaning and Definition of Credit

The word 'credit' has various meanings and is used in a variety of senses. It has an economic sense, a business sense, an accounting sense and a general sense.

(a) *Its Economic Sense.* We usually speak of a cash transaction and a credit transaction. By cash transaction we mean a transaction in which cash is paid at the time of the purchase of a commodity or service. Credit transaction, on the other hand, implies a transaction in which the payment of cash is postponed to a future date. In this sense, which is the economic sense of the term, *credit implies the postponement of payment*. Jevons aptly describes credit as 'nothing but the deferring of a payment'.

(b) *Its Commercial Sense.* In commercial parlance, the word 'credit' generally signifies the financial reputation of a businessman or a business house. Credit of a businessman is based on (i) his business ability and (ii) his honesty. If the credit of a businessman is good, he can borrow large sums, a privilege denied to a man of little or doubtful credit. This implication of the word 'credit' is closely related to its economic sense.

(c) *Its Accounting Sense.* Accountants use the word credit to mean the right-hand side of a ledger account.

(d) *Its General Sense.* Credit, in ordinary language, also means 'trust' or 'praise'.

It is, of course the economic sense of the term 'credit', which is of special importance to the student of Economics and in which it is habitually used by economists.<sup>1</sup>

##### Essentials of Credit

Credit involves three essentials :

(1) *Exchange or Transfer of Value.* The exchange or transfer of something valuable from one party to the other is an essential element of credit. Unless some goods or services have been transferred

<sup>1</sup> Credit has been defined by various writers in different ways. For instance, *McLeod* speaks of credit as the Present Right to a Future Payment. *L. Walras* calls credit as 'the lending of capital.' *Carlo F. Ferrares* regards credit as 'the whole of those economic conditions because of which men consent to make payments in the present on the promise of repayment in the future.'



party to the other, the question of the postponement of payment (*i.e.*, credit) cannot arise.<sup>2</sup>

(2) *Time.* Time is involved in credit. In other words, every credit transaction involves futurity. It is, of course, the postponement of payment to a future date which makes a transaction 'credit' transaction. If the payment is made immediately it will become a cash transaction, pure and simple.

(3) *Confidence.* The most important and basic element of credit is confidence. Unless one has confidence (*a*) that the borrower is carrying on a profitable business in an efficient way, so that he would have the wherewithal to pay back the money at a future date; and (*b*) that he is *honest* and would be willing to pay back his liability when he is able to do so one would not grant credit. Confidence, which is based on the economic and moral qualities of the borrower, is the fundamental basis and the most important element of credit.<sup>3</sup>

### Importance and Utility of Credit

The importance of credit in the present age is too obvious to need detailed discussion. If you carefully see all around you, you will find that in every walk of economic life credit plays a vital part. The retailer purchases goods from the wholesaler on credit. The wholesaler, in his turn, gets credit from the manufacturer. The manufacturer, again, gets capital, raw materials, etc., on credit. In this way the entire economic structure is bound together by the string of credit. That is why the failure of one firm is often the forerunner of the failure of other firm operating in similar and dissimilar business fields alike. Large-scale production, which is one of the most remarkable characteristics of the present age, has been made possible by credit in a very definite sense. Again *credit institutions (i.e., bank) and credit instruments (i.e., written evidences of credit transactions which are used more or less like coins and currency notes such as cheques and bills of exchange)* are vital constituents of the economic structure of a country. The importance of credit can, therefore, be easily realised.

The main advantages of credit are the following :

(1) *Credit gives rise to credit instruments* which serve the purpose of metallic currency. This is advantageous in three respects : (*a*) Credit instruments constitute a *cheaper medium of exchange* than metallic coins. (*b*) Credit instruments are *more convenient* than metallic currency. For instance, a cheque of Rs. 100 can be easily written, but the counting of coins worth Rs. 100 and the ascertaining that they are all genuine, takes much time. (*c*) *Metallic coins cannot fully*

2 Some text-book writers mention *amount* as an element of credit instead of *exchange*. The *amount* is, however, vague, inexpressive and of doubtful meaning, and in my opinion it should not be used in the present context.

3 The element of confidence is so important that 'credit' is now applied by some writers to that belief in a man's probity and solvency which will permit of his being entrusted with something of value belonging to another, whether that something consists of money, goods, services or even credit itself as when one man entrusts to another the use of his good name and reputation.—S. E. Thomas, *Elements of Economics*, p. 433.



meet the *currency requirements* of the present-day society and credit instruments fill the gap with great efficiency.

(2) A natural corollary of the foregoing utility of credit is that it makes the *transmission of money to distant places cheap and easy*. If you have to pay your creditor at Madras Rs. 1,000 you can send silver coins ; but much time, labour and money will be saved if you send him just a bank draft<sup>4</sup> of that amount.

(3) *It makes possible the collection of unspent part of the incomes of the people*. Banks mobilize the financial resources which might remain idle otherwise, by offering attractive rates of interest. The habit of thrift is thus inculcated in the masses.

(4) The vast reservoir of capital formed by collecting tiny stream-lets of personal savings is allowed to flow out into the hands of entrepreneurs with brain and acumen but without adequate capital or carrying on business. Thus *credit encourages production*. Not only this ; but by enabling payments to be postponed till it is convenient for the borrower to make them, it also diminishes difficulty and hardship.

(5) *Credit minimises price fluctuations*. When a boom is imminent and prices are looking up, a check on credit expansion is likely to keep prices stable. On the other hand, if a depression is about to set in and prices are going down, an expansion of credit might prevent its occurrence. Again, when trade is reviving slowly after a period of depression gradual and systematic expansion of credit may be expected to bring up the prices to the pre-depression level.

(6) *Credit enables governments to obtain funds* with which to meet emergencies when no other means are available for the purpose.

(7) *Credit enables individuals to tide over temporary financial difficulties*. For instance, it makes possible the purchase of goods for consumption purposes pending the receipt of income.

Credit, which is the source of so many benefits and advantages, is also attended with some dangers. Credit is subject to human control, and if that control is not exercised with caution and intelligence, grave repercussions are likely to follow. The main dangers are the following :

(1) *The liability of credit to be issued in excess* is its most important disadvantage. The issue of credit is a profitable job—the large and more numerous the loans a banker gives, the more the interest it earns ; and the larger the credit a businessman allows, the higher the sales he makes. As such, there is always the danger of its being overissued beyond the legitimate business requirements. The danger becomes particularly great during the time of business prosperity when unwise credit expansion often leads to excessive zeal, over-production and speculation. To safeguard against this danger, the institution of Reserve or Central Bank has been devised.

4 A Bank Draft is, in simple language, a letter given by one bank office to its own branch or Head Office or correspondent situated at some other place instructing it to pay a definite sum of money to the person therein named.



(2) *Credit may enable a man of doubtful ability to start a speculative and unprofitable business, only to ruin himself and others who have granted him considerable credit. Again, a businessman may continue a losing business with the help of borrowed capital. He may in this way disguise his financial weakness and increase his financial commitments only to make the consequences of his eventual failure more widespread and disastrous. Fortunately people have become alive to this danger and a thorough investigation at the time of giving credit is found to be a dependable safeguard.*

(3) *Credit enables consumers to obtain money which they often squander away recklessly and become financial wrecks. In our own country, a fair share of the rural indebtedness is the result of the borrowing of money for consumption purposes.*

(4) *Modern credit organisation leads to the formation of monopolies and combination and to central control, which use unfair methods of competition to crush their competitors, increase prices and exploit labourers. This danger is sought to be checked by laws against unfair competition and combination.*

### § 1. CREDIT AND CAPITAL

Whether credit is capital or not, is an oft-debated point. There has been some difference of opinion among economists on the subject ; and though the controversy is of a theoretical nature and has, therefore, now been relegated to the background, it has not been made absolutely free from the fog of confusion. 'Capital' as we have already studied, is that part of wealth which is used for further production of wealth. To decide, then, whether credit is capital or not, two questions arise :

(i) Is credit wealth ?

(ii) Is it used for further production of wealth ?

(i) We have defined credit as *postponement of payment* ; it is an abstract concept. In this sense, we cannot say that credit has utility, or is scarce, or is transferable ; in fact, the statement does not seem to make sense. To argue it differently, we want credit not for its own sake, but for the sake of the things and services that we can acquire if we are given credit. Hence credit in itself has no utility. Hence credit is not wealth.

(ii) As credit is not wealth, it cannot be capital. Hence the second question does not arise. Our conclusion, therefore, is that credit is not capital.

*Is a Credit Instrument Capital ?* This is the next question which automatically arises at this stage. Now, a credit instrument does not satisfy a want directly : we do not want a credit instrument for its own sake. But since a credit instrument enables us to acquire things which possess utility, we want credit. Now, since a credit instrument does not satisfy a want, we cannot say that it is wealth ; and if it is not wealth, it cannot be capital. Credit instruments, then, do not constitute capital.



*Credit Helps in the Creation of Further Capital.* But while credit or a credit instrument does not in itself count as capital, it certainly helps to create capital.

*Credit Transfers Capital.* The true function of credit is to transfer capital from one person to another. If A gives credit to B, then A gives up the use of the purchasing power and B acquires the right to use that much of purchasing power. If you give me a loan of Rs. 200, you forego the use of Rs. 200 and I acquire the right to use it. In this sense, then, credit is said to transfer capital. "Credit", according to Ricardo, "does not create capital, it only determines by whom capital should be employed." Similarly Mill said that "credit being only the permission to use the capital of another person, the means of production cannot be increased by it but only be transferred".

For instance, let us assume that some resources are lying idle. Later on they are given on credit to a producer who might bring the idle resources into action and may thus augment capital. Here we can say that credit augments capital. But it does not necessarily create capital in all cases.

Our conclusions, therefore, are that (i) credit is not capital ; (ii) a credit instrument is not capital ; (iii) credit serves to transfer wealth or capital; and (iv) credit does not necessarily increase capital.

This statement needs a word of caution. Credit transfers capital; but it may transfer only wealth. Take the case of X who gives a loan of Rs. 200 to Y for consumption. In this case wealth is transferred from X to Y. Credit thus transfers wealth in this example, not capital. It must not, therefore, be supposed that credit always transfers capital; it may also transfer wealth.

*Does Credit Create Capital?* Sometimes credit creates capital. Sometimes a man possessing a certain amount of wealth has no use for it. It is not capital to him. He might give it on loan to another man who might use it productively. In such a case credit converts wealth into capital, or creates capital.

### **Credit Mechanism**

In these days of enormous credit and efficient organisation, a well-organised credit mechanism has been set up to make credit arrangements easy, convenient and safe. Its two important constituents are: (a) *Credit instruments* which are written evidences of credit transactions, e. g., Bills of Exchange, Promissory Notes, etc., and (b) *Credit institutions*, e. g., Banks which receive deposits and lend money to the borrowers.

## **§ 2. CREDIT INSTRUMENTS**

### **Meaning**

In modern society, credit transactions are evidence by written documents containing an undertaking to pay a definite sum of money. They are known as credit instruments. The important credit instruments are promissory notes, bank notes, bills of exchange, cheques and *hundis*.



## Credit Instruments and Money

Credit instruments are given and accepted in discharge of debts just like money; but there are certain points of difference between money and credit instruments : (1) Money is always legal tender : a debtor can legally compel his creditor to accept it in due discharge of debt. Credit instruments, however, do not enjoy this privilege. (2) Because of the legal tender character, money is *generally acceptable*. A shop-keeper accepts rupee coins from the buyer because he knows that others would unhesitatingly accept them. This is not the case with credit instruments. A person accepts a cheque or a *hundi* from another only if he is confident that the cheque or the *hundi* will be duly honoured. In the absence of this certainty, he will refuse to accept it. Credit instruments are, therefore, only *especially acceptable*. (3) Finally, credit instruments are written undertakings to pay money and must necessarily be different from *money*. They are, in a limited sense, substitutes for money.

We shall now discuss the chief forms of credit instruments.

### Promissory Notes

**Definition.** A promissory note has been legally defined as an instrument in writing (not being a bank note or a currency note) containing an unconditional undertaking, signed by the maker to pay a certain sum of money only to or to the order of, a certain person or to the bearer of the instrument.

**Parties to a Promissory Note.** There are two parties to a promissory note : (a) the person who makes and signs the note and thereby undertakes to pay, called the *maker* ; and (b) the person to whom money is to be paid, called the *payee*.

**Demand and Time Promissory Notes.** A promissory note contains a promise to pay money either on demand when it is called a Demand Promissory Note, or after some time when it is described as a Time Promissory Note.

The notes issued by the Reserve Bank are promissory notes but they have been specially excluded from the legal definition of the term. Promissory notes, other than Bank notes or Currency notes, are written on stamped papers, the value of the stamps being *ad valorem*, i.e., varies according to the value of the document. The following is an example of a promissory note :

Allahabad.  
July 13, 1957.

St mp

Rs. 300 only.

Two months after date, I promise to Pay to Messrs  
Ramji Lal Shyamji Lal Co., or order, the sum of Rupees  
three hundred only, for value received.

For Narayan Press,  
(Sd.) G. P. Tiwari.



## Bank Notes and Currency Notes

Bank notes or currency notes are promissory notes, as they contain the promise of the Government or the Central Bank to pay a certain sum of money on demand to the bearer of the instrument. If a note is issued by the Government, it is known as Currency Note ; but when it is issued by the Central Bank, it is known as the Bank Note. Bank or currency notes, though credit instruments, are in fact money since they are always legal tender. As such, notes differ from other forms of credit instruments in all the respects in which money differs from them.

## Bill of Exchange

*Definition.* A bill of exchange is legally defined as an instrument in writing containing an unconditional order signed by the maker, directing a certain person to pay a certain sum of money only to, or to the order of, a certain person, or to the bearer of the instrument. In simple words, a bill of exchange is an order from a creditor to the debtor to pay a certain sum of money to himself or to a specified person or to the bearer.

*Parties to a Bill.* There are three parties to a bill of exchange—the drawer, the drawee and the payee. The person who draws or makes the bill, *i.e.*, the creditor, is called the *drawer* ; the person on whom the bill is drawn, *i.e.*, the debtor, is called the *drawee* ; while the person who is authorised in the bill to receive the payment is known as the *payee*.

*Demand and Time Bills.* A bill of exchange may be payable on demand when it is known as Sight or Demand Bill, or it may be payable after a specified period when it is known as Time or Usance Bill. In the case of Time Bills, three days of grace are added to the specified time in order to arrive at the due date. No such days of grace are allowed in respect of Demand Bills. Time Bills must pay an *ad valorem* stamp duty which is not charged on demand Bills.

*Acceptance.* A time bill, after it is properly written, is presented to the acceptor for his acceptance. He accepts it by writing the word, “accepted” on the face of the bill with the signature below it. After acceptance a bill becomes a *pukka* document binding on the acceptor. It is then known as Acceptance. The following is an example of a bill of exchange.

Rs. 700

Allahabad.

April 15, 1957.

stamp

Two months after sight of this bill, pay to me  
or my order the sum of rupees seven hundred  
only for value received.

To

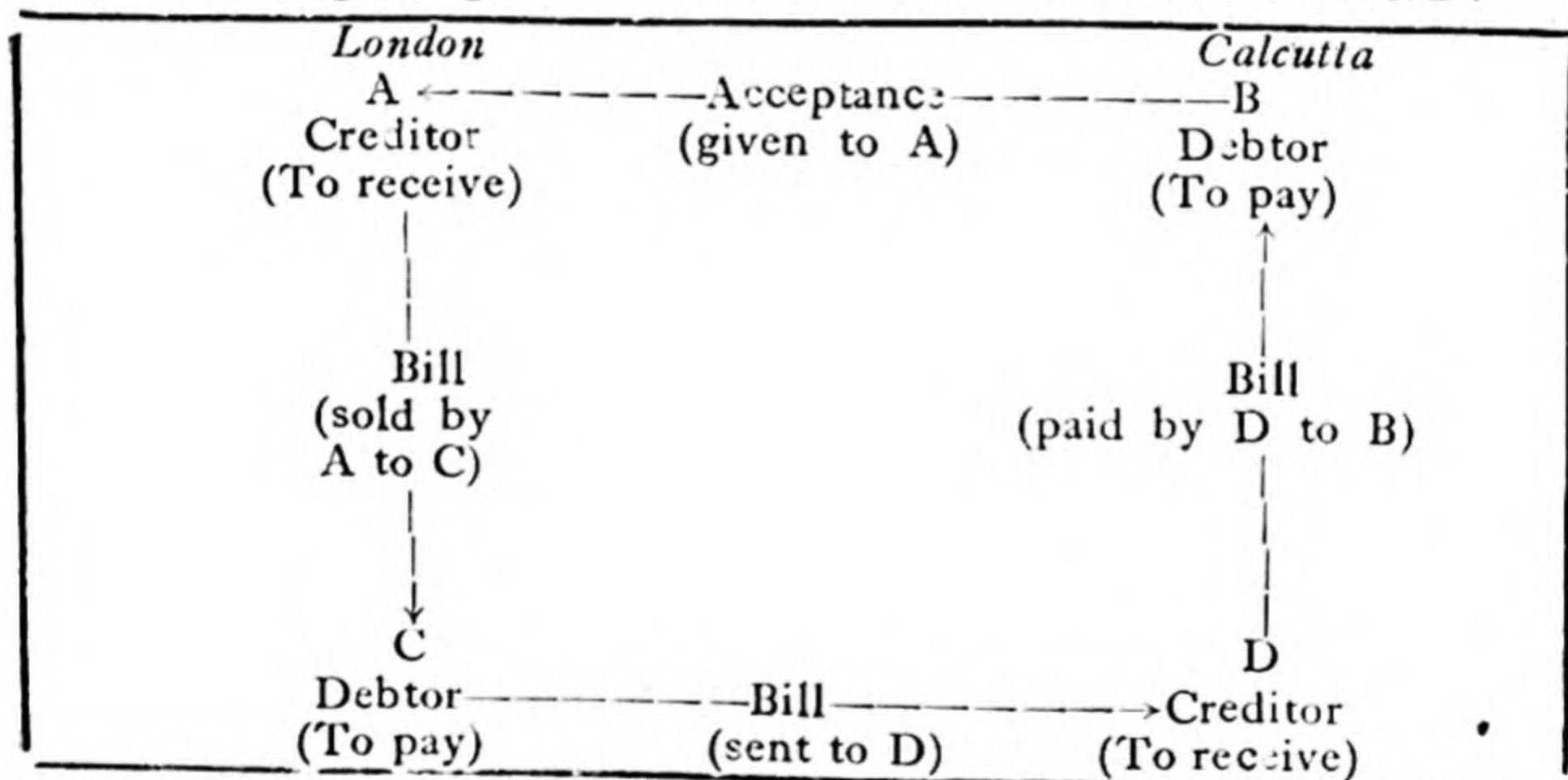
The Krishna Press,  
Allahabad.

For Kitab Mahal, Allahabad,  
S. Niwas,  
Proprietor.

This bill has been drawn by the Kitab Mahal (the drawer) on the Krishna Press (the drawee). Kitab Mahal is specified as the payee. The bill will be accepted by the drawee by writing the word "Accepted" with his signatures across the face of the document.

**Inland and Foreign Bill.** A Bill of Exchange is used not only in respect of inland dealings but also in respect of international dealing. The former type of bill is called the *Inland Bill* and the latter, the *Foreign Bill*. Foreign Bills render an important service in the business community. If metallic coins were to be used for paying foreign creditors, two difficulties will arise: Firstly, foreigners will refuse to accept coins on their face value since they are not current in their own country. They will accept them only as bullion. Secondly, much time, labour and money will be wasted in shipping coins from country to country. These difficulties are solved by the use of Bills of Exchange. The London creditor may just draw a bill on his Calcutta debtor and sell it in London to a man who has to make payment to his Bombay creditor. The London creditor thus gets his money immediately from a Londoner. The latter sends this bill to his Bombay creditor who presents it to the Calcutta debtor (the drawee) and receives payment from him. Thus accounts are settled without a single pie being shipped from either country.

The diagram given below shows how accounts are settled :



It is the balance of the mutual indebtedness of the two countries which alone has to be liquidated by shaping metal or coins.

### A Bill of Exchange and a Note

A bill of exchange differs from a currency or bank note in significant respects :

#### *Bill of Exchange*

- (1) It has three parties—drawer, drawee and payee.

#### *Note*

- (1) It has only two parties—issuer and payee.



- |   |   |
|---|---|
| (2) It is an order to pay.  | (2) It is a promise to pay.                                     |
| (3) It requires acceptance by drawee.   | (3) It does not require acceptance.                             |
| (4) It may be issued by anybody.  | (4) It is usually issued by the Government or the Central Bank. |
| (5) It is not legal tender and is not a part of currency.   | (5) It is legal tender and is a part of currency.               |
| (6) It may be demand or time.   | (6) It is always demand.  |
| (7) It cannot be re-issued.   | (7) It can be re-issued.  |
| (8) It is not subject to special restrictions (except those imposed by the Negotiable Instruments Act). | (8) It is issued under special Act.                             |
| (9) It is very important in making foreign payments.  | (9) It is not so important.                                     |
| (10) A bill may be drawn in a set of three.   | (10) It is not so drawn.  |

## Cheque

*Definition.* A cheque is an instrument containing an unconditional order signed by the depositor directing his banker to pay on demand a definite sum of money to himself or to the person named therein or the bearer of the cheque. Legally it has been defined as a bill of exchange drawn on a specified banker, and not expressed to be payable otherwise than on demand. In other words, *a demand bill of exchange drawn on a banker is known as a cheque.*

When a depositor opens a current account with a bank, he is given a cheque book. Whenever he desires to withdraw money himself or to make payment to some other person, he fills in a cheque; and cashes it with his banker or gives to it the other person who cashes it with the banker. Banks have now begun issuing cheque books to savings bank depositor also.

*Parties to a Cheque.* Like a bill of exchange, a cheque has three parties, *viz.*, (1) drawer, the depositor who writes the cheque; (2) the drawee, the bank on whom the cheque is drawn; and (3) the payee, the person specified in the cheque for receiving payment. Cheques are of three kinds: bearer cheques, order cheques and crossed cheques.

*Bearer Cheques.* A bearer cheque is made payable to the bearer, *i.e.*, it is payable to the person who presents it to the bank for encashment. The bank is under no liability to ascertain that the payment is made to the right person. If a man finds a bearer cheque lying on a street and gets it encashed by the bank, the latter is not liable for

the wrong payment. Bearer cheques do not require endorsements. The following is an example of a bearer cheque :

No. A 5302	Allahabad. June 1, 1957
IMPERIAL BANK OF INDIA	
Allahabad	
Pay to Dr. R. Dubey or bearer rupees five hundred only.	
Rs. 500.	For Kitab Mahal, Publishers, S. N. Agarwala, Manager.

*Order Cheque.* A cheque made payable to a certain person "or order" is called an order cheque. In the case of an order cheque, the bank is liable to ascertain that it is paid to the right person. If the payment is made to a wrong person due to the negligence of the bank, it shall be responsible for wrong payment. An order cheque must also be endorsed at the time of its transferability. Endorsement is effected by signing the name on the back of the cheque. In the absence of an endorsement, the transference of the order cheque will be invalid.

*Crossed Cheque.* Sometimes two parallel and transverse lines are drawn across the face of a cheque with or without the words "A/C" or "& Co." etc. Such a cheque is known as a crossed cheque. A crossed cheque cannot be encashed at the counter of the drawee bank. The bank on whom it is drawn shall pay it only to a bank. When a man receives a crossed cheque, he usually deposits it with his own banker who collects it from the drawee bank. Such cheques are absolutely safe as chances of wrong payment are evidently minimised.

*A Cheque and a Bill of Exchange.* The following are the points of difference between a cheque and a bill of exchange.

- | <i>Cheque</i>   | <i>Bill of Exchange</i>  |
|---|--|
| (1) It is always drawn on a banker.   | (1) The drawee may not be a banker.  |
| (2) It is not accepted.   | (2) It is accepted, unless it is a demand bill.  |
| (3) It is always payable on demand.   | (3) It may be a demand or a time document.   |
| (4) It is used, generally, for internal circulation only.                           | (4) It is a very important means of settling international indebtedness.                                 |
| (5) It may be crossed.  | (5) It is never crossed.   |
| (6) The drawee is not bound to pay, and will not 'pay, in case of any irregularity. | (6) The drawee who has accepted it is bound to pay it under any circumstances.                           |
| (7) The bank is protected against forged endorsement of a cheque drawn on him.      | (7) The bank which pays a bill containing a forged endorsement cannot debit the acceptor for the amount. |



(8) Any delay in the presentment of the cheque to the bank does not free the drawer and endorser from liability unless the bank fails in the meantime.

(8) If the (time) bill is not presented on due date, drawers and endorsers become free from liability.

*A Cheque and a Bank Note.* The following are the points of difference between a cheque and a bank note :

#### *Cheque*

#### *Bank Note*

- (1) It is not legal tender.
- (2) It is an order to pay a certain sum of money.
- (3) It may be bearer or order.
- (4) It is drawn by a depositor.
- (5) It may be crossed.
- (6) Its life is short as it does not inspire confidence in all.

- (1) It is legal tender.
- (2) It is a promise to pay a certain sum of money.
- (3) It is always bearer.
- (4) It is made by issuing authority—the State or the Central Bank.
- (5) It is not crossed.
- (6) It has long life as it inspires great confidence in all.

*Cheques in Backward Countries.* Cheques have many advantages. They constitute a very cheap medium of exchange ; their volume varies directly and automatically with currency requirements of the country ; and they have many other merits besides. It is unfortunate that in backward countries the use of cheques is not well developed. The following are the means by which the practice of using cheques can be extended in such a country : (1) The masses of such a country are mostly illiterate and cannot write cheques. Attempts must be made to spread education among them while banks should devise some method of enabling even the illiterate to draw cheques. (2) At present cheques are usually written in English. All persons do not know English, which prevents the use of cheques on a large scale. Attempts must be made to persuade or compel banks to make use of vernaculars. (3) Banks should provide facilities for prompt encashment of cheques at the counter. Traders and other customers should be encouraged by banks to use cheques. (4) Joint stock and co-operative banks should allow money to be withdrawn from savings bank accounts by cheques. Cheques should be accepted in payment of land revenue, local rates and taxes. (5) The Government and local bodies should also make payments through cheques. (6) Big banks should adopt the policy of charging low rates of commission on up-country cheques. (7) Finally, extension of banking facilities is likely to encourage cheque habit.

#### **Bank Draft**

A bank draft is a cheque drawn by one bank upon another bank or its own branch situated at a different place, requiring it to pay a certain sum of money to a specified person or to his order or to

the bearer. A bank draft may be inland or foreign. Usually persons who have to make payment to distant creditors go to their bank to obtain a bank draft. They have to deposit with the banker the amount to be remitted plus a small commission. Draft is then issued which is sent to the creditor concerned who gets it encashed.

## Hundi

*Definition.* Hundi is the oldest surviving form of credit instrument in this country. In simple words, a hundi can be defined as a written order, *usually unconditional*, drawn by one person on another for the payment, on demand or after a specified time, of a certain sum of money, to a person named therein. A hundi is not quite an Indian bill of exchange as the existing text-books often make it out to be<sup>5</sup>. A bill of exchange is always an unconditional order while a *hundi* is sometimes conditional.

*Functions of Hundis.* Hundis play a very important part in the financing of the internal trade of this country. It is a convenient form of remittance of money from one place to another. It is also used for getting advances. A merchant in need of funds sometimes draws a hundi on his agent or some other person or firm with whom an arrangement is made beforehand, and gets it discounted at the bank. But the hundi does not occupy the same position in India as the bill of exchange does in England. A hundi does not contain anything to show that it is drawn against commercial goods and, as such, banks do not readily accept it. Usually they require endorsements of well-known bankers on it.

*Sub-divisions of Hundis.* A *hundi* may be *darshani*, i.e., payable on demand, or *muddati*, i.e., payable after a specified period. Darshani and Muddati hundis are sub-divided into : (i) *Dhanijog Hundi*. *Dhanijog* hundi is payable to the Dhani or possessor or bearer. The bank is not liable if somehow the payment is made to the wrong person. (ii) *Shahjog* hundi is payable to 'Shah', i.e., to a respectable person. The bank which pays a *Shahjog* hundi is responsible to see that the presenter is the proper person to receive the payment. The *Shahjog* hundi is like a crossed cheque, the only difference being that such a cheque may be paid to a third party through a bank while the hundi is only to the special *Shah*. (iii) *Firmanjog Hundi*. This is made payable to order, the word *Firman* meaning order. (iv) *Dekhandar Hundi*. It is payable to bearer.

## SPECIMEN OF A HUNDI

Om

Number 345

*Sidh shree Allahabad shubhsthan shree patri bhai Navin Narain Sri Narain likhi Etah se Sri Nivas Sri Murari ki ram ram banchana. Appranch hundi kita nag ek rupia 250 ankan do sou pachas jiska nime rupia ek sou pachhis ka dona pura athe rakha. The Maha laxmi Etah*

<sup>5</sup> Dr. L. C. Jain, *Indigenous Banking*.



*bank Limited mas miti Bhadon sudi Naumi se din 60 sath pichche name shahjog Hundi chalan Kaldar diya, miti Bhadon sudi 9, Samwat 1978.*

### TRANSTATION

*Om*

To Messrs. Navin Narain Sri Narain of the pleasant and prosperous city of Allahabad, Sri Niwas Sri Murari send their greetings from Etah. Further, a hundi of Rs. 250, in words Rupees two hundred and fifty, the half of which is one hundred and twenty-five, pay the double of this to the Mahalaxmi Etah Bank, Limited, from Bhadonsudi 9 after 60 days in current money with Emperor's head after due inquiry. Bhadon sudi 9, samwat 1978.

*Explanation.* This is a time Shahjog hundi. Messrs Sri Niwas Sri Murari are the drawers : Messrs Navin Narain Sri Narain the drawees ; and Mahaluxmi Etah Bank, Limited, the payee. The Hundi is written for Rs. 250.

### INTERMEDIATE QUESTIONS

1. Write a note on cheque. (M. B., I. A., 1953).
2. What do you mean by credit ? Name some common instruments of credit. Can credit create capital ? (M. B., I. Com., 1952).
3. Explain the principal instruments of credit. Give specimens of any two of them. (P. B., I. Com., 1952).
4. What do you mean by credit money ? Why do we use this kind of money ? (P. B., I. Com., 1950-A).
5. Write a short note on a Crossed Cheque. (Pun., India, Inter., 1949).
6. Write a short note on Bill of Exchange. (Punjab, India, Inter 1948).
7. What is credit ? Discuss the advantages and disadvantages of credit money. (Raj., I. A., 1952).
8. What is a bill of exchange ? What part does it play in business ? (Tra., Inter., 1943).

## CHAPTER 46

### BANKS

"I was discussing the Bank Return with the Governor of the Bank during the war, and mentioned that there was only one line of it which I thought I understood, 'Gold Coin and Bullion.' The Governor, with a twinkle in his eye, replied, "Mr. Leaf, I do not think you understand even that."—*Leaf*.

Bank is an institution which deals in money and credit ; it is often styled as a *credit institution*. We shall briefly study this vitally important limb of modern economy in this chapter.

#### Definition of Bank

Banks perform a large variety of functions in the modern society. As such, the word 'Bank' has been defined in numerous ways according to the aspect, or aspects, specially emphasized by writers. The simplest definition of the word 'Bank' is the one which emphasizes the essentials of the institution. A bank, as everybody knows, receives deposits from those who want to commit their wealth to safety and also earn some interest ; in other words, *it borrows money*. *It also lends money* to the needy. The borrowing and the lending of money are its essential functions. It may, therefore, be defined as an institution which borrows and lends money. As the purchase and sale of the use of money are credit operations, economists usually define banks as *institutions dealing in credit and money*<sup>1</sup>.

#### Functions and Utility of Banks

The modern bank performs numerous functions which throw light on the variety of the services it renders to the modern civilized society. They have been rightly styled as the "nerve-centre of the modern world". These functions can be conveniently divided into three classes : (1) Primary Functions, (2) General Utility Functions, and (3) Agency Functions.

(1) *Primary Functions*. The primary and essential functions of a bank, as is evident from the definition of the word 'bank' are two; The borrowing and the lending of money. A bank borrows money with one hand in order to lend it with the other ; and this essential feature of this business remains the same whether the bank is a vast joint

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<sup>1</sup> Some authorities on banking give importance to the maintenance of current account. Thus Hart says, "A banker is one, who, in the ordinary course of his business, receives money which he repays by honouring of persons from whom, or for whose account, he receives it."—Hart, *Law of Banking*. Some economists maintain that the diversity of modern banking operation in order to satisfy the changing needs of our dynamic society forbids all attempts at an exhaustive definition of the term bank. We should describe the functions of various types of banks rather than define the bank itself. For instance, See Rau, *Elementary Banking*.



stock organization with a wealth of resources and network of branches and agencies, or a comparatively small private bank or "a pioneer bank a new country, with a stock-in-trade consisting of a tent, a safe, a trestle table and a revolve."

(a) *The Borrowing of Money.* Banks borrow money in the shape of deposits. Persons having money but faced with the problem of its proper investment or safe custody, deposit it with banks and, in many cases, receive interest.

Money may be deposited in a Current Account or a Fixed Deposit Account or a Savings Bank Account. In the case of a *Current Account*, the deposited money may be withdrawn by cheques whenever necessary and no notice need be given to the bank. Usually no interest is given on current deposits, unless a minimum balance of a considerable sum is maintained. In the case of *Fixed Deposit Account*, the deposit is made for a fixed period and is not withdrawable before the expiry of that period. An attractive rate of interest is given on such deposits. In the case of a *Savings Bank Account*, money deposited may be withdrawn with certain limitations ; for instance, in Post Office Savings Bank Deposits, withdrawals may be made only once a week and if a large sum is to be withdrawn, previous notice to the Post Office is necessary. Such deposits carry a moderate rate of interest.

This function of the bank encourages people to *save* money. When it is known that an easy and convenient means of safe and profitable investment of money in the shape of deposits is available, people who would have otherwise spent all their income or hoarded it underground, do not do so. They begin to take pleasure in seeing the balance of their Bank Pass Book increasing in amount through deposits and interest.

(b) *The Lending of Money.* The small deposits received by banks together constitute a huge amount. This is lent out by the banks to capable agriculturists, industrialists and businessmen who invest it in their ventures to their own profit and to the economic advancement of the country. The tiny streamlets of individual savings flowing into bank vaults are thus made to flow out as mighty rivers to irrigate the fields of agriculturists, to move the wheels of industry and to float the vessels of commerce. The great service rendered by banks in converting huge idle resources into active capital by acting as a sort of standing brokers between the quiet saving districts and persons, and the active employing districts and persons, is too much to be appreciated. Money is lent to industrialists, agriculturists and traders in various ways. The discounting of bills of exchange and the granting of overdraft on current accounts are two important methods of commercial credit.

(c) *General Utility Functions.* Besides the primary functions mentioned above, the modern bank performs many miscellaneous functions which are of great general utility : (a) *Issue of Notes.* The issue of notes is usually entrusted to a duly constituted Central or Reserve Bank of the country which has the capacity to perform this function more



efficiently than the Government. In India the sole right of the note issue is vested in the Reserve Bank of India. In Great Britain, the Bank of England enjoys this privilege. (b) *Supply of Currency*. Modern banks are means through which not only paper currency but all forms of currency are put into circulation. They also discharge the relative duty of withdrawing from circulation coins and effaced notes. (c) *Issue of Credit Instruments*. Banks create credit instruments like bank drafts, cheques, letters of credit, etc., which economise the use of metallic currency, make the transmission of money over long distances convenient and cheap, and remove the want of medium of exchange felt by modern communities currency alone being inadequate to meet the entire need. (d) *Foreign Exchange Business*. In olden days, each country used to have different kinds of money in different parts, and bankers did the useful work of changing one kind of money into the other kinds. This gave them the name of 'money-changers'. This function has now become defunct as each country has begun to maintain a uniform currency throughout its length and breadth. But different countries still possess different currencies and banks play the important role of purchasing and selling foreign currency, foreign bills of exchange and other credit instruments in exchange for the currency of the country in which they are situated. They facilitate foreign trade to an appreciable degree. (e) *Safe Custody of Valuables*. Banks undertake to keep in safe custody valuables and important documents in specially constructed strong rooms which are sure safeguards against fire and theft. The small payment charged by them for the purpose is nothing in comparison to the utility of the service rendered.

(3) *Agency Functions*. Banks also render many "agency services" by acting as agents of their customers in various capacities: (a) They collect and pay cheques, realise dividends and interest and pay subscriptions and insurance premiums in the capacity of special agents of their customers. (b) Banks conduct stock and share transactions on behalf of their customers. (c) They act in various other agency capacities such as those of trustees, attorneys and executors.

### Kinds of Banks

The financial requirements of the modern community are diverse and various so that different types of banks have been set up for specializing in different kinds of works as mentioned below :

1. *Commercial Banks*. They finance the internal trade of a country. They collect the floating capital of the community and finance the temporary needs of commercial transactions.
2. *Exchange Banks*. Their sole concern is to finance the foreign trade of a country.
3. *Industrial Banks*. They finance the industries requiring long-term credit.
4. *Agricultural Banks*. They finance agriculture. As a rule, they provide the long-term finance.



5. *Co-operative Banks.* They are usually started with the object of financing short-term needs of agriculture and industries.
6. *Savings Banks.* They mobilise the small savings of the people in the savings bank accounts.
7. *Indigenous or Private Bankers.* In most of the countries there is a large number of private or individual bankers who have been catering to the various financial requirements of the community as a hereditary occupation.

### **Banks Lend More Than What They Deposit**

An interesting aspect of the banking business is that banks are in a position to make advances much larger than the deposits that they receive. It is a sort of anomaly and often puzzles students.

In order to understand this problem, it should first be made clear that the money borrowed from a bank is usually deposited in the same bank by the borrower, either because the bank insists on it or because there are certain advantages in having a current account deposit. It is this procedure which makes the deposits of a bank so large. Such deposits are known as *credit deposits* as against *cash deposits* i.e., the deposit of actual cash. Now banks know on the basis of their past experience that the whole of the money deposited is not withdrawn at any particular time. The maximum possible demand is usually a certain percentage of the total deposits. This percentage may come to 10 per cent. Banks will, therefore, keep a 10 per cent. "reserve" against deposits and lend the remaining amount. Thus suppose a cash deposit of Rs. 1,000 is made with a particular bank. It will keep (10 per cent. of Rs. 1,000 =) Rs. 100 as reserve against this deposit and give a loan of Rs. 900. This amount will be deposited by the borrower in the same bank. It will keep (10 per cent. of Rs. 900 =) Rs. 90 as reserve against this deposit and give a fresh loan of Rs. 810. This process will be repeated as long as possible. According to this policy, the bank will be in a position to lend roughly ten times more than the cash deposit it receives.

### **Profit and Loss Account and Balance Sheet of a Bank**

The important accounting documents of a bank are : (1) Profit and Loss Account, and (2) Balance Sheet.

*Profit and Loss Account.* A Profit and Loss Account shows the various items of income and expenditure, strikes out the net profit or loss, and explains the appropriation thereof. The following is an imaginary Profit and Loss Account of XYZ Bank, Limited.

*Profit and Loss Account of the XYZ Bank, Limited for the year  
ending December 31, 1956.*

Dr.		Cr.	
Particulars	Rs.	Particulars	Rs.
To General Expenses ..	25,000	By Balance ..	10,000
To Depreciation of Premises	9,000	By Interest and	
To Income Tax ..	3,000	Discount ..	150,000
To Balance ..	123,000		
	<u>160,000</u>		<u>160,000</u>
To Dividend Paid ..	100,000	By Balance ..	123,000
To Balance ..	23,000		
	<u>123,000</u>		<u>123,000</u>

In this account the left-hand (debit) side records all items of loss and expenditure and the right-hand (credit) side, of gain or income. The balance of Rs. 123,000 is the net profit of year 1956. Its appropriation is shown in the lower half of the Account : Rs. 100,000 are paid in the shape of dividends, leaving a balance of Rs. 23,000.

**Balance Sheet.** *Balance Sheet is a statement showing the assets and liabilities of a concern, thus giving an idea of its financial position. Assets indicate the properties in the possession of the bank and the money owing to it by others. Assets are shown on the right-hand side of the Balance Sheet. Liabilities are the financial obligations of the concern and are shown on the left-hand side of the Balance Sheet. We give below an imaginary bank's balance sheet for the sake of illustration.*



*Balance Sheet of the XYZ Bank Limited, for the year ending  
December 31, 1956.*

Liabilities	Rs.	Assets	Rs.
Authorized Capital : 50,000 shares of Rs. 10 each	500,000	Cash in Hand and at Bank ..	300,000
Issued Capital : 25,000 shares of Rs. 10 each	250,000	Money at call and short notice ..	100,000
Subscribed Capital : 20,000 shares of Rs. 10 each	200,000	Investment in Securi- ties .. ..	1,000,000
Paid up capital : 20,000 shares of Rs. 10 each	200,000	Loans and Advances	100,000
Reserve Fund	190,000	Bills Discounted. ..	150,000
Deposit Accounts	1,300,000	Banks Premises ..	73,000
Interest Accounts	10,000		
Profit and Loss Account	23,000		
	1,723,000		1,723,000

**Liabilities.** This Balance Sheet needs explanation. We shall discuss the liabilities first. (1) *Capital*. Capital is the first item. Capital is of various kinds. *Authorised Capital* is the maximum amount which the company is authorised (by its Memorandum) to raise. It is Rs. 500,000 in the above B/S. Usually the whole of the authorised capital is not issued for subscription by the public : only a part of it is so issued and it is called *Issued Capital*. The Issued Capital amounts to Rs. 250,000 in the above B/S. The share capital which is actually subscribed for by the public is known as *Subscribed Capital*. It is shown at Rs. 200,000 in the Balance Sheet under discussion. *Called-up Capital* is the capital which the directors of the bank call upon the subscribers to pay. The *Paid-up Capital* is the capital actually paid by the the share-holders : it is 200,000. (2) *Reserve Fund*. Usually a part of profits is withheld from being distributed as dividend and is transferred to what is called the *Reserve Fund* to be made use of in times of financial embarrassment. (3) *Deposit Accounts* of Rs. 1,300,000 represent the total deposits received by the bank. (4) *Interest Account* shows that the bank has to pay Rs. 10,000 by way of interest. (5) *P. & L. Account* shows the balance of the P. & L. Account which was discussed above.

*Assets.* Let us now briefly examine the assets of the Balance Sheet as well. (1) *Cash in Hand and Cash at Bank.* It is too simple to need explanation. (2) *Money at Call and Short Notice.* This is the money lent by the bank on the condition that it will have to be paid whenever called or after the expiry of a short notice given to the effect. (3) *Investment in Securities.* (4) *Loans and Advances.* (5) *Bills Discounted.* The Bank has discounted bills of exchange worth Rs. 1,50,000, it has to receive this amount from the acceptors of the bills on their respective due dates. (6) *Bank Premises, i.e.,* buildings of the bank, are valued at Rs. 73,000.

### [INTERMEDIATE QUESTIONS

1. Show how a commercial bank raises its working capital and lays it out. What services does it render to the community? (Bombay, I. A., 1940).
2. Write a critical and explanatory note on Bank Money. (Bombay, I. A., 1940).
3. Describe the various functions performed by a joint stock bank. (Bombay, Karachi, I. Com., 1952).
4. What are Banks? Describe the functions of Commercial Banks. (M. B., I. Com., 1953).
5. Describe the services of banks to society, to lenders and to borrowers. (Patna, I. A., 1951).
6. Describe the services rendered by a commercial bank to a modern community. (Patna, I. A., 1952).
7. What are the functions performed by a Central Bank? (Patna, I. Com., 1952).
8. What do you mean by balance sheet of a Commercial Bank? Draw an imaginary balance sheet of a Commercial Bank? (Patna, I. Com., 1949).
9. Describe the various types of banks. Explain the part played by the Central Bank in the banking system of a country. (Poona, I. A., 1949).
10. Distinguish between (a) Commercial Bank, (b) Co-operative Bank, and (c) Central Bank. (Punjab, Int., 1949).
11. Explain the functions and utility of a modern commercial bank. (Raj., I. A., 1952).
12. Briefly indicate the main functions of a bank. To what extent does the Sahukar perform its functions in India? (Raj., I. Com., 1950).
13. Discuss the functions of Commercial Banks. (Utkal, I. A., 1951).



# Distribution

Book V

Chapters 47-52

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## CHAPTER 47

### THE PROBLEM OF DISTRIBUTION

All wealth that is created in society finds its way to the final deposition of the individual through certain channels or sources of income. This process is called Distribution.—*Seligman*.

#### § 1. INTRODUCTION

#### **Distribution as a Department of Economics**

Distribution of wealth is the fourth branch of Economics, which we shall now study. "What is understood by 'distribution' as a branch of Political Economy is the study of the principles on which the product of any complicated industrial process is distributed amongst those who have in any way contributed towards securing it."<sup>1</sup>

In modern times production of wealth takes a co-operative form. Landlords, capitalists, labourers, organizers and entrepreneurs work together in the productive activity. Therefore, the wealth which they jointly produce belongs to all of them. The problem which, then, arises is : How to distribute the wealth thus produced amongst the agents taking part in its production?

The answer seems to be simple. Each of them, it may be said, should be given a share of the joint product proportionate to his share in the effort. This principle of distribution is as fair and equitable as we would like it to be ; but the difficulty is that it cannot be put into practice. We have no instrument or method by which we can measure the share of each producer in the productive effort and apportion the share in the wealth produced accordingly. As Penson rightly observes, "How is it possible to separate the result of each man's efforts from that of the efforts of the group ? One man has worked as an engineer, another as an invoice clerk ; one has been engaged in some process of manufacture, another in conveying the finished goods to the warehouse. It would be difficult to determine what each of these has contributed to the final result."<sup>2</sup> But in spite of this difficulty wealth is distributed among the agents of production. What are the principles then, according to which the distribution of wealth actually takes place in the modern society? Are these principles just and fair ? If not, what changes in the present method of the distribution of wealth

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<sup>1</sup> Wickstead, *The Commonsense of Political Economy*, p. 359.

<sup>2</sup> Penson, *The Economics of Everyday Life*, Part I, pp. 137-38.



are necessary? Such are the problems to which we address ourselves in the branch of Economics known as distribution. *Distribution may, therefore, be described as the descriptive, critical and constructive study of the principles according to which wealth is distributed amongst the different agents of production.*<sup>3</sup>

### Distribution as an Act

Distribution is also an economic act. In this sense it can be said to be *the method in which the wealth jointly produced by the agents of production is divided or distributed among them.*

### Another Meaning of Distribution

The word *distribution* is used in another sense as well. It sometimes means the distribution of commodities amongst its purchasers—consumers who purchase for direct consumption and sellers who purchase for resale. The means of transport and commercial organizations like shops are called *distributive agencies*. In the present discussion, the word *distribution* is not used in this sense.<sup>4</sup>

### Origin of the Problem of Distribution

In the primitive days, each man worked alone and with his own resources. A weaver, for instance, purchased yarn from the spinner, prepared the cloth himself or with the aid of the members of his family, and sold it in the market for whatever he could get in exchange. The money thus obtained belonged to him and to nobody else; the question of distribution did not arise at all. By slow degrees, this stark individualism and economic independence sank into the yawning gulf of time, to be replaced by social life and economic interdependence. Productive efforts began to assume co-operative character on an increasingly extensive scale; hundreds of men began to work together to produce each commodity. The wealth thus produced belonged to all of them and the question of distribution arose in the natural course of things.<sup>5</sup>

Before the Industrial Revolution, which occupied approximately one hundred years in England, from 1750 to 1850, the problem of

3 Distribution may be *Functional* or *Personal*. Under *Functional Distribution*, we discuss how each factor of production obtains a given money income in the form of rent, interest, wages and profits, which is exchanged for a share of the total consumption of goods. *Personal Distribution* discusses how individual persons obtain a given amount of wealth and income. *Functional Distribution* makes an attempt to explain how the price of a factor of production is determined. *Personal Distribution* explains inequalities in the distribution of wealth and income among individuals. Also see James, *An Outline of the Principles of Economics*, Ch. XIII.

4 In popular discourse, the term *distribution* often refers to the transference of commodities from place to place or from person to person; or, in other words, the term refers to the operations of wholesale and retail trade. Logically, distribution in this sense is part of production. Distribution (the economic sense here adopted) refers to the division of the wealth of a nation amongst the different classes.—Nicholson, *Elements of Political Economy*, p. 95.

5 Penson gives a vivid description of the old order of things and the new order. See *Economics of Everyday Life*, Part I, p. 138.



distribution was not an important issue. It was the Industrial Revolution which accentuated the co-operative feature in productive process and increased the scale of production. The modern problem of distribution may, as such, be regarded as its legacy to the posterity.

### Conflict in Distribution

Since there is no accurate measure of the just share of each agent of production, conflicts over distribution of wealth often arise. *Landlords* demand a substantial share on the ground that they supply land or natural resources which fundamentally give rise to the finished products. *Capitalists* likewise assert that they provide machinery, implements and money without which production on any important scale is not possible : their contribution is very valuable and their share should be equally big. *Labourers* say that it is they who actually convert raw materials into finished products ; if they cease to work, the entire productive machinery will come to a standstill. Still they get small wages just sufficient to keep themselves alive, other agents of production unjustly appropriating what really belongs to labourers. This theory is the inspiring motive of that great movement of Socialism which is spreading like wild fire in every country of the world. *Organisers* claim that the efficiency of entire production depends upon their bringing into effective co-operation the various factors of production. *Entrepreneurs*, not to lag behind, maintain that it is they who undertake the risk ; if risk is not undertaken, production will be stinted to the irreducible minimum of necessities for existence. Because of these conflicting claims, the subject of distribution has become the most controversial and the most important branch of Economics. In passing, it may be added that in the present-day organization of society labourers appear to be unjustly treated in the matter of distribution of wealth ; their contribution is solid and substantial but their reward is very little.

## § 2. THE PROBLEM OF DISTRIBUTION

The problem of distribution resolves itself into three main issues :

- (1) What exactly is there to be distributed?
- (2) Who are entitled to a share ?
- (3) How distribution takes place and what determines the amount of each individual's share in income ?

### 1. What is to be Distributed ?

The question, what is to be distributed, appears to be very simple. A beginner may give a quick reply, "Evidently whatever is jointly produced by the agents of production, is to be distributed". This answer is, however, not quite correct. The whole wealth produced is not available for distribution. A fraction of it has to be used for making good the capital consumed in its production, whether the capital is *circulating*, which is consumed in a single operation, or *fixed*, which wears out gradually. Again, taxes have got to be paid out of it.



The balance left after making these provisions is the amount available for distribution.

(a) *The Replacement of Circulating Capital.* During the productive process, the circulating capital is used up and has to be purchased again before further production is possible. In a furniture factory the stock of wood has to be purchased as soon as it is used up so that the manufacture of furniture may be continued. Similarly, in the case of a shoe factory, leather has to be replaced from time to time for the same reason. From the total wealth produced we must, therefore, set apart a certain sum for such replacement before we can arrive at the net amount available for distribution.

(b) *Depreciation and Replacement of Fixed Capital.* Fixed capital, like machinery, implements and ploughs, etc., lose their value with the passage of time, through wear and tear or otherwise. This gradual loss in value is known as *depreciation*. Fixed asset depreciates gradually till it becomes worthless and requires replacement. Its probable life can be estimated and during the period of its use, a certain sum is annually set aside in a Depreciation Fund so that when the asset becomes useless, sufficient money is available in the Depreciation Fund to purchase a new asset. For instance, if the price of a machinery is Rs. 1,000 and its estimated life is 10 years, Rs. 100 can be added annually to the Depreciation Fund. After ten years, when the machinery becomes worthless, Rs. 1,000 will become available for the purchase of another machinery. Provision is thus made out of the total wealth produced for the depreciation and replacement of fixed capital.

(c) *Taxes.* Citizens have to pay various State and Municipal taxes so that the Government and semi-Government bodies may discharge their functions efficiently. A part of wealth produced is thus taken away by the State in the shape of taxes.<sup>6</sup>

The total wealth jointly produced by the co-operative agents of production is known as *Gross Product*. The wealth left after meeting the above three demands is known as the *Net Product*. It is the Net Product which is available for distribution.

*Example.* Suppose the total wealth produced by a shoe factory in the year 1956 is Rs. 1,000. It employs a circulating capital of Rs. 200 and provides annual depreciation on fixed asset of Rs. 50. It pays Rs. 50 as taxes each year. Find out its Gross Product and Net Product.

The answer is simple. Rs. 1,000 is the Gross product and if we deduct from this sum the replacement charges of circulating capital, depreciation on fixed capital and taxes ( $\text{Rs. } 200 + \text{Rs. } 50 + \text{Rs. } 50 = \text{Rs. } 300$ ), we arrive at the Net Product, namely, ( $\text{Rs. } 1,000 - \text{Rs. } 700 = \text{Rs. } 300$ ). The following diagram (No. 43) illustrates the point.

<sup>6</sup> For a lucid explanation, see Moreland, *Introduction to Economics*, pp. 235-238.



*National Income or National Dividend.* If we add up the Net

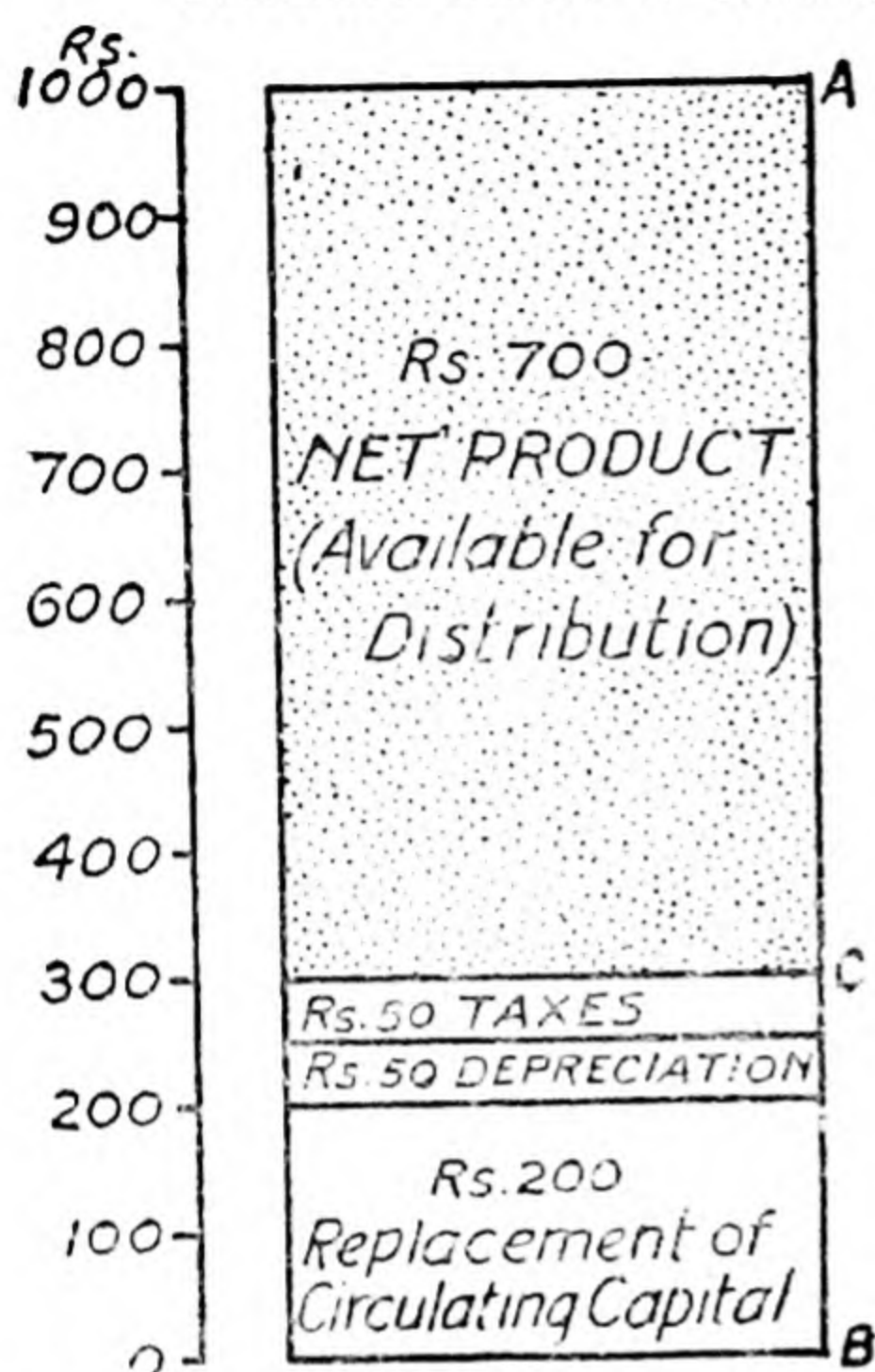


Fig. 43. Explaining the constituents of Gross Produce.

Product of all the productive enterprises of the country during a given period, we arrive at the total Net Product available for distribution among its inhabitants. This total Net Product is called *National Income* or *National Dividend*. Marshall explains the concept of the National Dividend as follows: "The labour and capital of the country, acting on its national resources, produce annually a certain *net* aggregate of commodities, material and immaterial, including services of all kinds. This is the true net annual income or revenue of the country; or the National Dividend. We may, of course, estimate it for the year or for any other period."<sup>7</sup>

The word National Dividend is used in its arithmetical sense as the amount *to be* divided, and not in its commercial sense as the amount shared out. It must not

be looked upon as a store accumulated by a year's labour, sacrifice, etc., but rather as a stream continually flowing and being continually used up.<sup>8</sup>

## 2. Who are Entitled to a Share ?

The answer to this question is not difficult. Evidently those are entitled to a share of Net Product, who have contributed to the productive efforts. The factors of production are five, namely, Land, Capital, Labour, Organization and Enterprise. Those who supply them get a share<sup>9</sup>. Landlords get *rent*; Capitalists, *interest*; Labourers, *wages*; Organizers, *salaries*; and Entrepreneurs, *profits*.

<sup>7</sup> Marshall, *Principles of Economics* (1930 Ed.), p. 523. Pigou defines National Dividend as "that part of the objective income of the community, including, of course, income derived from abroad, which can be measured in money."—Pigou, *Economics of Welfare*.

<sup>8</sup> Crew, *Economics of Commercial Students*, p. 85.

<sup>9</sup> The following is a graphic description of the origin and distribution of the national dividend. We "may regard the contribution of each productive unit as being added to a vast reservoir of wealth into which flows continually the result of the efforts of all classes in the community. The reservoir represents the *national* or *social wealth* of the community which from day to day is being added to by its economically active citizens, and, on the other hand, is being continually drained of some or of all its surplus by four great streams

**Organizer and Entrepreneur.** Some writers make no distinction between the entrepreneur and organizer,<sup>10</sup> obviously meaning thereby that both the functions of risk-taking and organization are in their opinion rolled together in the same person. This view is not quite correct. In these days, the work of organization has become so technical that men with special aptitude, training and experience alone can do it satisfactorily—the qualities not necessarily possessed by risk-taker. Sometimes the constitution of the business unit itself makes the division in these functions absolutely essential. In the case of a joint stock company, for instance, all the share-holders are entrepreneurs or risk-takers; but all of them do not take part in the management of the business. Paid organizers or managers are usually employed for the purpose. In such case, then, organization is not supplied by the same persons who supply enterprise. These considerations show the advisability of treating organization and enterprise as two different factors of production.<sup>11</sup>

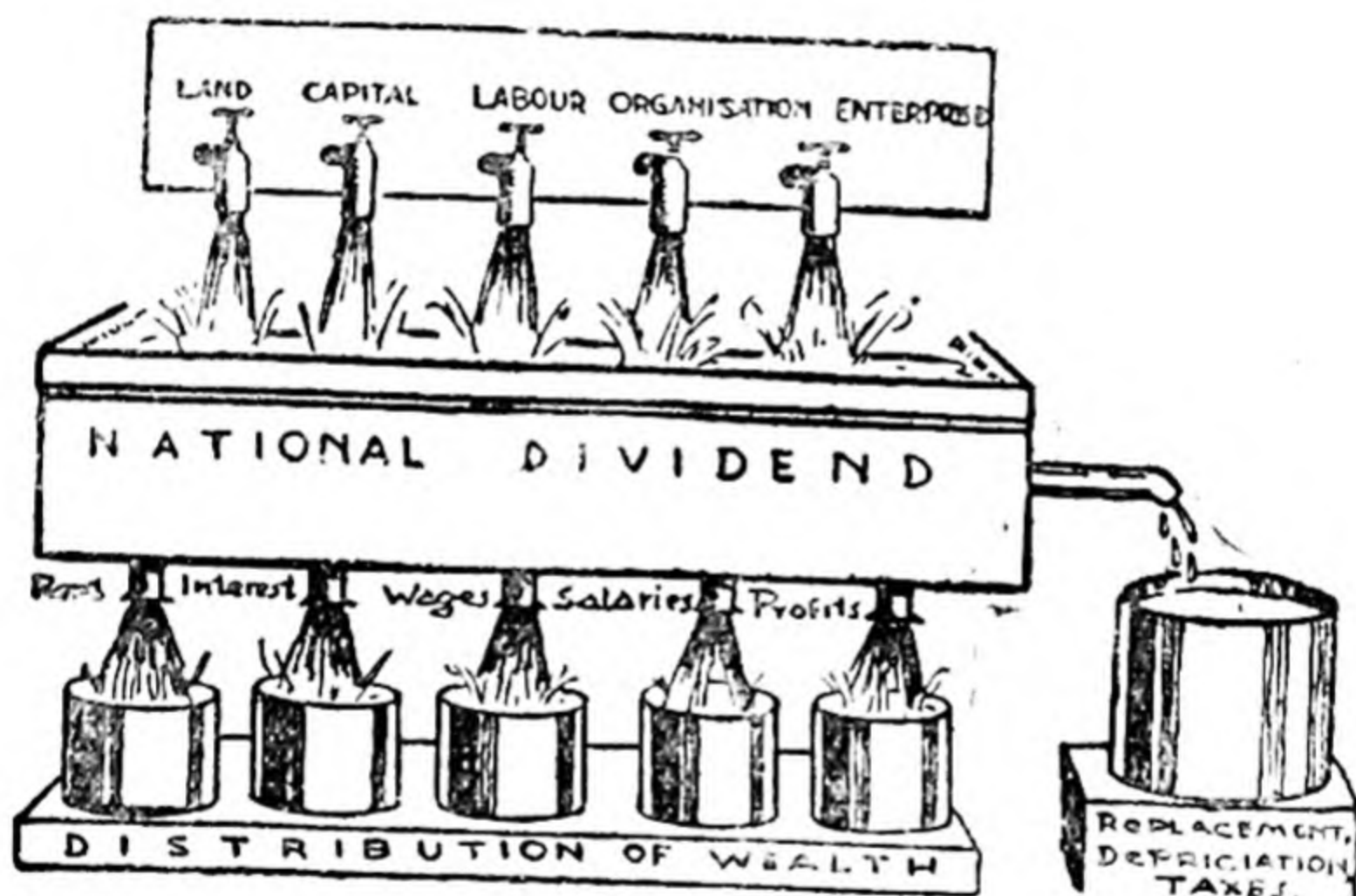


Fig. 44. Illustrating the origin and distribution of the National Dividend.

It must not be supposed that an individual can supply one and only one factor of production. In fact, there are cases in which one person supplies several factors of production at the same time. Share-holders of a joint stock company are risk-takers; they are also capitalists as they supply capital. The dividend, which they receive

which in total represent the *national dividend or social income* and individually from the incomes at present respectively to the four great classes in society—land-owner, labourer, capitalist and entrepreneur.”—Thomas, *Elements of Economics*, p. 237.

<sup>10</sup> Marshall and his followers belong to this class.

<sup>11</sup> This is also the view of American economists in general.



on their shares, contains (1) interest on the capital supplied by them, and (2) profit for the risk that they undertake. Again, take the case of managing partner. He supplies capital, undertakes the risk and performs the managerial duties. He is an entrepreneur, a capitalist as well as an organizer.

### 3. Method of Distribution

The issue of the method of distribution concerns itself with the following : (a) How does the the distribution actually take place? and (b) What determines the share of each agent of production ?

(A) *How Does Distribution Take Place ?* Older economists were at a loss to understand how distribution takes place. They gave very vague explanations of the phenomenon. Adam Smith, for instance, wrote, the total produce "is naturally distributed among the different ranks of people"; and John Stuart Mill maintained that this produce "distributes itself by spontaneous action". These explanations are obviously unilluminating and do not make us any the wiser.

The method of distribution<sup>12</sup> obtaining in modern society, though complex, may be explained in simple words as below. The entrepreneur works as the distributor. Before actual production is commenced, he calculates how much produce is likely to be sold and at what price. This gives him *Gross Produce*. Then he subtracts from *Gross Produce* the replacement and depreciation charges and taxes to be paid to the Government. The balance is the *Net Produce*. The above calculation requires comprehensive estimation and forecast; but as he is supposedly in the know of the actual facts and is experienced, his estimation is generally a near approach to accuracy. After finding out the Net Produce available for distribution in this way, he proceeds to make bargains with landlords, capitalists, labourers and organizers for the supply of land, capital, labour and organization respectively, taking care that a sufficient margin is left from the *Net Produce* for himself. Production is then commenced and goods are sold as they are produced. In the end, if the net produce realised exceeds the sums paid out as rent, interest, wages and salaries, the surplus is reward or profit of entrepreneur ; if the former falls short of the latter, the entrepreneur suffers a loss.

(B) *How is the Share of Each Agent of Production Determined ?* This is perhaps the most difficult and important problem of Distribution. It shall be discussed exhaustively in the following pages and may be given a short and provisional treatment here.

Each factor of production, it must be remembered, is just like a commodity and its reward is determined by the interaction of demand and supply. Entrepreneur, when purchasing a factor of production, has a maximum price to offer; he will not pay more than that. His maximum is determined by the marginal productivity of a particular

<sup>12</sup> Penson has explained this point very lucidly in his book *The Economics of Everyday Life*, Part I, pp. 143-144. Text-book writers on the subject have generally followed him.

factor of production. Just as in the case of an ordinary commodity, the maximum of the buyer is determined by the marginal utility of the commodity. The owner of a factor of production has a minimum price determined on a rough estimate of expenses of production; he refuses to accept a price lower than this. Between these maximum and minimum limits, the price is determined according to the relative forces of demand and supply existing at the time. The reward of entrepreneur, as we have already stated above, is the residue of the Net Produce left after the satisfaction of all other claims.

It is, indeed, the study of the determination of the share of each factor of production, which constitutes the main body of the subject of Distribution. Distribution, it will be realised, is merely the application of the theory of value to various factors of production.

### INTERMEDIATE QUESTIONS

1. What is meant by National Dividend? What principle governs its distribution? (Bombay, I Com., 1948).
2. Define and explain National Income. How is it created and distributed? (Patna, I. A., 1950).
3. What is the meaning of distribution in Economics? How does it take place? (Patna, I. A., 1948).
4. What do you mean by National Dividend? How is the share of labour in the National Dividend determined? (Patna, I. Com., 1948).
5. What is National Dividend? Account for its unequal distribution in a community. (Poona, I. Com., 1950).
6. What is National Dividend? How is it measured? (Poona, I. Com., 1949).



## CHAPTER 48

# MOBILITY OF FACTORS OF PRODUCTION

Some of the earlier European writers on Economics assumed the existence of what may be called complete Mobility of Labour ; they assumed, that labourers would go to work wherever the inducements were greatest ; almost as certainly as water will flow downhill until it reaches the lowest possible level. Such perfect mobility probably does not exist.—*Moreland*.

### § 1. INTRODUCTORY

Before discussing how the reward of each agent of production is determined, we shall address ourselves to the subject of the mobility of factors of production.

#### Meaning of Mobility

The word *Mobility* is generally used with reference to a factor of production. Mobility, according to dictionary, means the capacity to move easily. The mobility of a factor of production, therefore, implies its capacity to move from one place or use to another place or use, easily and quickly. Land, labour, capital, organization and enterprise, are all mobile in varying degrees.

#### Advantages of Mobility

Mobility of a factor of production is advantageous in several respects :

(1) *Proper Distribution*. If mobile, a factor of production easily changes the place or field of its application ; it moves from the place where it is abundant to one where it is comparatively scarce. Thus the curious paradox of the plenty of a factor at one place and its scarcity at another within the same country and the same at time, becomes a thing of the past, and the resources of the country are well organized to secure the maximum national dividend.

(2) *Equalization of Reward*. Due to the mobility of a factor of production, its owner is enabled to employ it in the most remunerative channels. This tendency ultimately results in the widespread equalization reward of that factor of production.

(3) *Equalization of Marginal Productivity*. As a result of the mobility, an *entrepreneur* is able to follow the law of substitution. He substitutes a cheap factor of production for a dear one till he finds that the marginal productivity, *i.e.*, the wealth produced by the marginal (or final) unit of each factor of production is equal. This is known as the *Law of Equi-Marginal Productivity*. A faithful adherence to this law, made possible by the mobility of various factors of production, is the hallmark of efficient organization and yields maximum profit.

Obviously, the mobility of various factors of production is advantageous to their owners, their employers and the country as a whole alike.

## The Assumption of Free Mobility

The old economists, known as classical economists, assumed the free flow of factors of production from less profitable to more profitable fields of their application. This is the necessary corollary of perfect competition. In actual practice various obstacles stand in the way of free mobility. Perfect mobility, like perfect competition, does not actually exist. Since the assumption of free mobility in the orthodox economic theories is removed from reality, they sometimes become hypothetical in their nature.

### § 2. MOBILITY OF LAND

Land cannot move from one place to another ; in other words, place mobility is not possible in the case of land. But a plot of land devoted to one use can be put to some other use subsequently. For instance, a plot of land used for the growth of wheat can be made to grow millet. Again, land used for agricultural purposes can be utilised for constructional purposes. But land devoted to the construction of buildings cannot be used for cultivation unless the building has long disappeared.

There are various obstacles hindering the mobility of land from one use to another. Due to sheer conservatism, cultivators may refuse to grow maize on a plot of land so far devoted to millets though the former might be more profitable; or they might not possess sufficient knowledge for the cultivation of the latter while they might be well qualified for the former. Lack of proper equipment, seeds and such other things might disable them from changing the crop raised. Marketing difficulties might also forbid any change. Happily, all such obstacles to the mobility of land are gradually losing their force.

### § 3. MOBILITY OF LABOUR

#### Meaning and Kinds

By the mobility of labour we mean its ability and willingness to move from the place, occupation or grade to another place, occupation or grade. Mobility of labour is of three varieties:

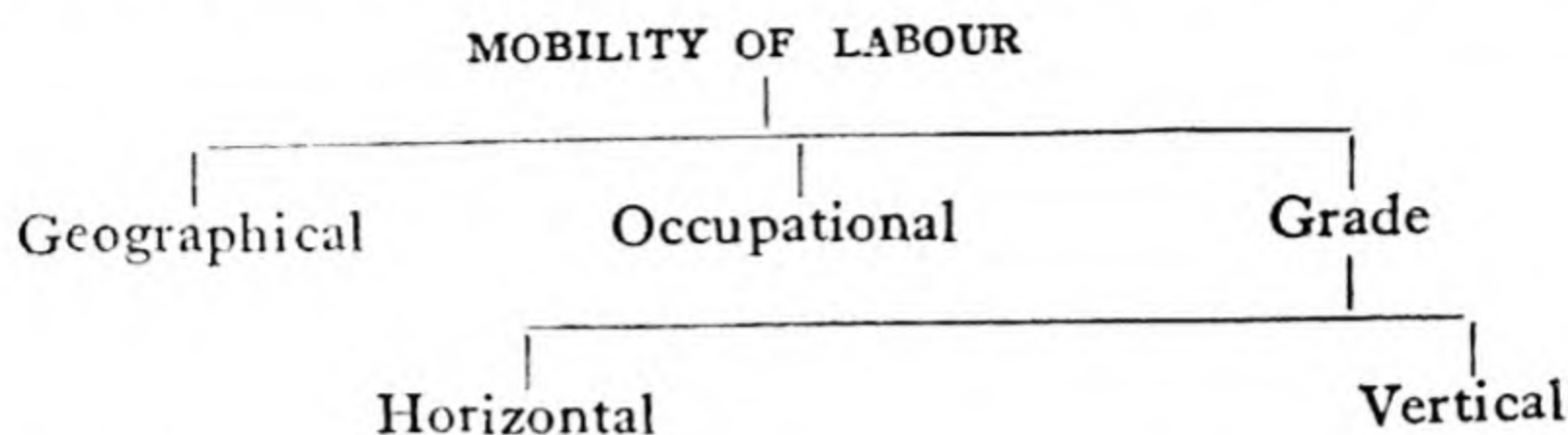
(1) *Geographical or Place Mobility.* The movement of labourers from one place to another is known as Geographical or Place Mobility. The movement of a labourer working in Allahabad to Banaras or Calcutta is an instance of geographical mobility.

(2) *Occupational Mobility.* If a labourer changes his occupation, his mobility is said to be Occupational Mobility. If a driver becomes a clerk, his mobility is occupational.

(3) *Grade Mobility.* The movement of labour with respect to the grade of work is known as *Grade Mobility*. The mobility of labour *in the same grade* is known as *horizontal mobility*. For instance, a fireman in one glass factory might move to the job of fireman in another glass factory, if he gets higher wages, more leisure or better treatment there. The movement of labour *from one grade to another*



*grade* is known as *vertical mobility*. The promotion of an assistant manager to the post of a manager is an example of vertical mobility.<sup>1</sup>



*These varieties of mobility of labour are not mutually exclusive, i.e.,* is must not be understood that a particular case of mobility can be only of one variety and not of more than one. On the other hand, a case of mobility may be geographical, occupational as well as grade mobility. Suppose a man from Allahabad working as an unskilled labourer goes to Kanpur to work as a carpenter, his mobility is geographical since he has changed the locality, occupational since he has changed occupation, and grade since he has been promoted to a higher grade. But horizontal and vertical mobilities, being the two types of grade mobility, do not overlap. A mobility can be either vertical or horizontal, and not both at the same time.

### Geographical Mobility

Geographical mobility of labour is common everywhere in the world. In our country, though not of considerable importance at present, it is definitely increasing. Geographical mobility is either permanent or temporary. Sometimes labourers leave one place for good and settle at another place permanently. It may happen due to *social causes* like excommunication ; *economic causes* like the sale or dispossession of land or better condition of employment available elsewhere ; or *religious causes* like Hindu-Muslim riots. Permanent mobility is not so important in India as temporary geographical mobility. Cultivators generally go to the neighbouring industrial towns during the off season, when they are idle, only to come back to their fields after a short period. The hill exodus of Government offices, occasional transfer of Government officials and movement of labourers to the place of fairs or *melas*, are other instances of temporary mobility. Temporary mobility is encouraged by lack of employment, and climatic, technical, political and administrative considerations.

Labour is the most difficult factor of production to move from one place to another because of various personal considerations even when such movement is economically profitable to labourers. But with the spread of education, dissemination of knowledge regarding

1 Writers have not paid as much attention to the subject of *mobility* as it deserves. Classification of the mobility of labour in particular is not always free from vagueness and ambiguity. I have tried to be as logical and unambiguous as possible in the above classification.

2 Parsees first came to Bombay due to a religious cause.



possibilities of employment at other places, and under the pressure of struggle for existence, labour has begun to move from place to place.

### Occupational Mobility

Mobility from one occupation to another occupation takes place when the general attractiveness of the latter exceeds that of the former. The following are the factors that attract labourers from one occupation to another : (1) *High wages*. Other things remaining the same, an occupation promising higher wages will attract more labourers as compared to those occupations where wages are low. (2) *Aggreableness of work*. Aggreableness of work attracts labourers and its disagreeableness repulses them. (3) *The ease of learning the business*. If a business is easy to learn, it becomes more attractive to labourers as compared to one which necessitates difficult, costly and long apprenticeship. (4) *The regularity and security of employment*. If the employment is secure and regular, it is very attractive to workers. (5) *The possibilities of success and rise*. The occupations where chances of success are great and the scope for progress is considerable, is always liked by workers. (6) *The degree of trust reposed in the worker*. If the employment requires a high degree of honesty and sincerity, the reward and prestige attached to the office are considerable. It becomes attractive to men endowed with integrity and honesty but unattractive to those who lack these qualities. It may be emphasized, however, that though all these factors have a telling effect on occupational mobility, the most important of them is the first one, namely, the rate of wages. Other factors are static and do not vary considerably from time to time; therefore, they exert little influence on occupational mobility.

The occupational mobility of labour also depends upon its skilled or unskilled nature. Unskilled labourers have to do the work which requires no skill or training, whatever might be the occupation. As such, they can easily move from one occupation to another under the influence of increased wages. Skilled labour, on the other hand, is specialized. Skilled labourers in a particular occupation are specially trained for the purpose; and while they may be very suitable for the jobs they have been trained for, they may be misfits, or no better than unskilled labourers, in other occupations. As such, skilled labour is not very mobile occupationally.

The inability of skilled labour for occupational mobility is weakening gradually. As education is increasing, certain branches of knowledge and training hitherto confined to comparatively few persons are becoming the possession of the majority, and the gulf between skilled and unskilled labour is being levelled up. Again, the spread of machinery and the division of labour to an ever-increasing extent, have simplified each task to the maximum degree and have made them very much alike.

### Grade Mobility

Grade mobility, as said above, may be horizontal or vertical.

*Horizontal Mobility*. The mobility from one grade to another may be in the same occupation. For instance, a labourer working in



a particular sugar factory may have a cruel boss; he will then take the first opportunity to move to another sugar factory whose boss is kind and considerate. Horizontal mobility in the same occupation is not so important as the horizontal mobility from one occupation to another. In the latter case all considerations discussed above regarding occupational mobility apply with equal force.

**Vertical Mobility.** Mobility from one grade to another may be upward or downward, *i.e.*, a worker may move from a particular grade to a higher grade or to a lower one. It is easier to move down the scale than to move up.

The movement to a higher grade is possible in the following cases : (1) If a worker becomes distinctly efficient for a higher grade through education and experience, he might scale up. (2) If the demand for men able to fill up the posts of higher grade increases as a result of increased demand for the products of that industry, an opportunity for vertical mobility of this type arises. (3) If the labourers of the higher grade are somehow incapacitated or die or are withdrawn from the work due to certain reasons, labourers of lower grade get promotions.

Labourers go down from a higher grade if they lose efficiency or if unemployment spreads.

#### § 4. MOBILITY OF CAPITAL

By mobility of capital is meant its ability and willingness to move from one place or use to another place or use. Capital is the most mobile factor of production. Capital can be physically detached from its owner; therefore, the various and diverse personal factors like love of family, attachment to surroundings, etc., which influence the mobility of labour do not influence the mobility of capital. Moreover, capital can be easily and cheaply transmitted over long distances unlike labourers for whose transport conditions are not so simple.

The financial mechanism of a nation is the usual agency through which transfers of capital are made. In the modern age (a) a capitalist wanting to withdraw capital from, say shares of cotton textile companies and to re-invest it in those of, say, iron and steel industry, may simply ask his *Stock Exchange brokers* to do the needful. (b) Some capitalists deposit money with a *bank* and leave at their option the investment, withdrawal and re-investment of capital. (c) There are some capitalists who may *re-invest capital directly* in a business where their control is supreme. For instance, a man might set up his own firm of, say, sugar manufacturing and withdraw for the purpose money invested in tea shares or deposited in a bank.

#### **Factors Leading to the Mobility of Capital**

The most important conditions governing the mobility of capital are its security and its profitability, *i.e.*, the rate of interest obtainable. Unless the capitalist is sure that the new channel of investment is reasonably safe and sound, he will not ordinarily like to risk his capital in it. Other things remaining the same, the order of preference



follows the order of security. The rate of interest obtainable is another important consideration. Of the two investments equally secure, one giving high rate of interest will be preferred. The importance attached to either of these factors, depends upon the temperament of the investor. Cautious investors give more weight to security, while speculative investors are more attracted by profitability.

Other subsidiary factors governing the mobility of capital are (1) the existence of satisfactory and diverse channels of investment which is dependent upon the economic progress of the country ; (2) the existence of rapid means of communication and transmission of capital ; (3) the political stability of the region of investment ; and (4) the development of the financial mechanism.

The mobility of capital varies according to its liquid or fixed character. Liquid capital, *i.e.*, cash and goods which can be easily converted into cash, possesses a high degree of mobility. For instance, capital invested in securities always purchased and sold in stock exchange markets can be easily disposed of and the capital withdrawn to be put to some other use. Fixed capital, on the other hand, is not so mobile. Capital invested in buildings, machinery, etc., cannot be easily withdrawn. The sale of such goods takes time and involves loss.

#### § 5. MOBILITY OF ORGANISATION

Organization is of the nature of high-grade labour. Organizers are highly educated individuals and being sufficiently progressive as a general rule, are mobile geographically. Vertically, too, they are very mobile. Some difficulty, however, arises in the case of occupational mobility in so far as the organizational problems of an industry are peculiar to it.

#### § 6. MOBILITY OF ENTERPRISE

By mobility of enterprise we mean the capacity of risk-taker to move from one occupation to another where reward is higher, in proportion to the risk. In our country enterprise is slowly developing. Formerly its mobility was very little. Our entrepreneurs used to take the minimum risk and to float concerns for the objects found profitable by their foreign compeers in this country. But with the spread of education, growing contact with western industrialism and economic advancement of the country, the mobility of enterprise is increasing. The unrealistic industrial policy of the State, which we have already referred to, is the most important obstacle in the way and needs an immediate revision.

#### INTERMEDIATE QUESTIONS

1. Write a note on Mobility of Labour. (Bombay, I. Com., 1948).
2. What is meant by Mobility of Labour ? What are the factors which influence the mobility of labour in India ? Explain fully. (Patna, I. Com., 1951).
3. On what factors does mobility of labour depend ? What is the importance of mobility of labour ? (Punjab, Int., 1949).



## CHAPTER 49

### RENT

The exchange in value of all commodities, whether they be manufactures, or the produce of the mines, or the produce of land, is always regulated by those who continue to produce them under the most unfavourable circumstances. Corn is not high because a rent is paid but a rent is paid because corn is high. Rent is not a component part of the price of commodities.—*Ricardo*.

#### § 1. MEANING OF RENT

#### Economic Meaning of Rent

It was said in the preceding chapter that the share of the national dividend accruing to the landlord is called rent. Rent may, therefore, be defined as the income which accrues to the landlord from the ownership of any natural agent such as land, mines, waterpower, etc. As Marshall puts it, the income derived from the ownership of land and other free gifts of nature is commonly called Rent'.<sup>1</sup> From the point of view of the entrepreneur, rent may be said to be the payment for the use of land.<sup>2</sup>

*Ricardo's Definition.* Ricardo's definition of rent is sometimes quoted with approval in the text-books of Economics and committed to memory by students. According to Ricardo, "Rent is that proportion of the produce of the earth which is paid to the landlord for the use of the *original and indestructible* powers of soil." This definition of rent, however, is not quite correct. The following are its inaccuracies :

(1) Ricardo restricts the term rent to the payment made for the use of "soil" or "land". He excludes other free gifts of nature. As such, his definition is too narrow.

(2) The expression "*the original and indestructible powers of the soil*" is not a happy one. Fertility, which is an important factor in determining rent and value of land, is definitely destructible. Again, there are some properties of the soil which are not original but which are not distinguishable from land. Capital sunk in the land after a long time becomes indistinguishable from land and obeys the same economic

1 Marshall, *Economics of Industry*, p. 52.

2 *Rent of Land Surface.* If we take into account only land surface, we will find that rent in that case depends upon the following three factors : (i) *Original Fertility of the Soil.* Other things remaining the same, the more fertile the land the higher will be its rent. (ii) *Situation of Land.* Other things remaining the same, the better the situation of the land, the higher will be its rent. (iii) *Capital Sunk in Land.* Sometimes the capital sunk in land becomes just like land, and it is subject to the same economic laws which govern land rent and depends to some extent upon the capital so sunk. Hence we may define rent as *payment for the use of fertility of soil or its location or both as well as any capital so sunk in the soil as to obey the economic laws concerning land.* See in this connection S. E. Thomas., *Elements of Economics*, p. 24; and Clay, *Economics for General Reader*, pp. 351-352.



laws which land obeys. The income from such acquired power of property is rightly regarded as rent.

### Popular Meaning of Rent

The scientific or economic meaning of the term "rent" should be distinguished from its popular sense. In the popular sense the term is applied to the periodical payment for the use of a house including the ground on which it stands, of a farm or an estate, of forest, of a fishery, or a mine. According to this definition, rent includes not only payment for the use of land but also interest on capital invested in building and elsewhere, depreciation of fixed capital and profit. For instance, the payment which a tenant makes to his landlord for the use of his house includes not only rent in the economic sense but also interest on the capital spent in the construction of the building, its early depreciation, and remuneration for the risk or enterprise. Similarly the rent paid by a cultivator for the use of a farm includes not only pure rent but also interest on capital sunk in farm-building, drainage, etc., depreciation, and reward for risk-taking. The reader should remember that economists do not use the term "rent" in its popular sense.<sup>3</sup> Whenever he comes across the word "rent" in any book on the subject of Economics, he should take it to apply in the scientific, *i.e.*, economic sense.

### Rent and Tenancy

It should not be thought that rent necessarily implies the existence of the *tenant* and the *landlord*. In other words, it must not be supposed that rent is the payment which the *tenant* pays to the *landlord* and that it cannot arise unless land is let out by the latter to the former. As a matter of fact, landlord can use his land in either of the two ways: he may let it out to tenant, or himself use it productively. It is in the first case that he gets a fixed annual payment called rent. In the second case he does not receive any such reward but he may well be supposed to be his own tenant and to pay rent to himself.<sup>4</sup>

### § 2. ECONOMIC RENT AND CONTRACT RENT

Economists divide rent (in its scientific or economic sense) into *Economic Rent* and *Contract Rent*, the difference between which is of fundamental and vital importance.

3 Rent is popularly thought as a payment for the privilege of enjoying the use of any material object, a piece of land, a house, a boat, or anything you please. As used by most economists, on the other hand, rent means only a payment made for the use of *land*, that land further being conceived as unmodified by human art, or at least modified only in certain very fundamental and unalterable ways.—F. M. Taylor, *Readings in Economics*, p. 181.

4 The owner may be the cultivator, in which case he gets the rent. The owner may be the community, which then gets the rent. (This is the socialist proposal, which would not abolish rent, but transfer it to the State). Or, the owner may have let his land to a farmer, in which case the farmer pays the rent to the owner.—Hunt, *Man and Wealth*, pp. 30-31.



## Economic Rent

Land differs in quality. Some plots of land are very fertile and very favourably situated ; others, comparatively unfertile and unfavourably situated. At a particular time, there is some land under plough whose fertility, or location, or both, are worst of all the cultivated tracts, so much so that it cannot afford to pay any rent. This is called the *No-Rent Land or Marginal Land*. The output of every other land under plough is greater than that of the No-Rent land. The *surplus produce (or differential gain)* arising on super-marginal lands is called Economic Rent. Suppose at any particular time three plots of land, A, B and C are under plough; C is the no-rent land and yields 1,000 maunds of wheat. The application of equal productive resources results in 1,500 maunds of wheat from B and 2,000 maunds from A. The economic rent of B will then be 500 maunds and of A, 1,000 maunds. Economic rent may as such be defined as the *surplus produce or differential gain accruing to the owner of the land by virtue of its relative advantage of fertility, or location, or both, over the no-rent land*.

## Contract Rent

The rent which is actually paid by the tenant to the landlord for the use of land is known as Contract Rent. It is called contract rent because it is determined by a contract between the parties concerned. Contract rent of a land may be equal to, or greater than, or less than its economic rent. Under free competition, the rent actually paid is equal to the economic rent. If competition among landlords is more than that among the tenants, or if some custom or law prejudicial to high rents is in force, contract rent may be less than the economic rent. On the other hand, if tenants compete more freely among themselves than landlords, or if some custom or law operates against tenants, contract rent may exceed economic rent.<sup>5</sup> The practice of charging a contract rent in excess of the economic rent is called "rack-renting."

### § 3. DETERMINATION OF CONTRACT RENT

Contract rent is the price paid for the use of land and, like the price of any other commodity, is determined by the forces of demand and supply.

*Demand for the Use of Land.* The cultivator agrees to pay rent for a plot of land because he thinks that if he cultivates it, he would get a return which would enable him to pay all the expenses of cultivation, to get an income for himself and to have a surplus which he

<sup>5</sup> It is easy to conceive of conditions which may cause contract rent to differ from economic rent. Thus an unwillingness to leave a farm which has been held by parents and grand-parents may serve to induce a submission to the exaction of a rent which leaves an inadequate remuneration to the farmer for his labour. Similarly, a landlord may be unwilling to press an old tenant, even though the land has risen in value. Further, capital invested in the soil cannot be withdrawn at short notice. Some improvement may make take years to exhaust, and a tenant, who was unable to secure adequate compensation for unexhausted improvement effected at his cost, might lose less by renewing his lease at a rent higher than the land without those improvements could bear, than by abandoning the values represented by improvements.—A. W. Flux, *Economic Principles*, pp. 102-103.



can pay as rent. This surplus is the maximum that he will be willing to pay to the landlord. Good land yields a larger surplus per acre than bad land; the tenant's maximum, as such, will be higher in the former case than in the latter. In other words, his maximum will vary with the character of the soil and the location of land, the nearness of the market, facilities for marketing, and the price he is likely to get for the produce.<sup>6</sup>

*Supply of the Use of Land.* The landlord may use the land himself or may be willing to let it out. In the latter case there is said to be a supply of the use of land. The landlord calculates in his own mind, the surplus which may accrue to him if he cultivates the land himself. This surplus is the minimum which he will charge as rent for the use of his land. If he does not get this minimum as rent, he might cultivate the land himself or put it to some other purpose.

*Determination of Contract Rent.* The contract rent is determined by the interaction of the demand for and the supply of the use of land. The greater the intensity of the demand and the keener the competition among tenants relative to supply, the more will be the tendency of contract rent to reach the maximum. On the other hand, the greater the urgency of the supply and keener the competition amongst landlords relative to demand, the more will the contract rent tend to reach the minimum. Generally speaking, in new countries where land is abundant and competition among landlords is very great, contract rent is usually low. In old countries, particularly when they are thickly populated, competition among tenants is enormous and contract rent is more or less equal to economic rent. Sometimes cultivators pay even more than the economic rent in case competition is very keen among them or if they have no occupation besides agriculture to follow. This is called rack-renting and is common in India.

#### § 4. DETERMINATION OF ECONOMIC RENT : RICARDO

We shall now consider how economic rent is determined. The theory of Economic Rent is a very important problem of distribution. When the expression "Theory of Rent" is used, without any adjective before the term *Rent*, usually economic rent is meant.

The theory of economic rent was first propounded by David Ricardo (1773-1823), one of the most distinguished of the English classical economists ; and is called the Ricardian Theory of Rent. In this theory Ricardo, followed by later economists, focussed attention on agricultural land only. Other natural gifts were excluded from consideration, since the principles enunciated here apply with equal force to them as well.

#### Nature of Land

In order to be able to understand Ricardo's theory of rent, we should first understand certain fundamental characteristics of land.

<sup>6</sup> For an able discussion of the factors affecting the utility and comparative utility of land, see Richard M. Hurd, *Principles of City Land Values*.



(1) *Land differs in fertility.* Some plots of land are more fertile than others, *i.e.*, the application of equal doses of labour and capital results in a higher yield in some cases and less in others. It is this difference in fertility, combined with variations in locality, which gives rise to surplus or differential gain on the super-marginal lands. This surplus is economic rent.

(2) *The cultivation of land is subject to the Law of Diminishing Returns.* The return due to the application of a particular dose of labour and capital is less than that due to the preceding dose. As such, all the doses (except the marginal dose) enjoys surplus or differential gain over the final or marginal dose. This surplus, as we shall presently see, is economic rent.

(3) *Rent depends upon* two main qualities of the land—*fertility and location.* The more fertile a land, other things remaining the same, the higher will be its rent. Its location has similar influence on rent. Location implies, among other things, nearness of market, facilities of transport and the price prevailing in the market. Rent is the payment for the fertility and location of land.

### **Ricardian Theory of Rent**

Ricardo started with the supposition of a vast tract of a virgin land just colonized by a small number of men. Since the land is abundant and idle, no payment need be made for its use. Rent will not arise at this stage. The settlers will cultivate only the best or A grade land ; and competition will reduce the price of the agricultural produce just to the level of the expenses of production.

With the passage of time, the population of the colony will increase through births, or immigration, or both. The demand for agricultural produce will increase as a consequence and inferior or B grade land will have to be brought under plough. Now the application of an equal number of doses of labour and capital will yield heavier crop on the superior or A grade land and smaller crop on the inferior or B grade land. The surplus yield of the superior land over the inferior land under plough, is the economic rent.

If the population increases still further, still inferior or C grade land will be brought under plough ; and consequently rent on A grade land will increase while that on B grade land will begin to appear. This phenomenon of an increase in the rent of the super-marginal land and the appearance of rent on the (hitherto) marginal land, will go on repeating itself as population increases and submarginal land is picked up for cultivation.<sup>7</sup>

### **Illustration**

Let us assume that the supposed colony possesses four grades of land. The first or A grade land is cultivated in the first instance;

<sup>7</sup> Carver, *The Distribution of Wealth*, pp. 205-206.

and for a certain outlay of labour and capital, yields 50 maunds per acre. After some time, the second or B grade land is also brought under plough. For the same outlay, its return is, say, 45 maunds per acre. A surplus of  $(50 - 45 =) 5$  maunds begins to appear on A grade land. This is its economic rent.

After some time the population increases so much that even the third or C grade land comes up for cultivation and its yield per acre on the above outlay is, say, 35 maunds. Thus surplus produce or economic rent of A grade land is now raised to  $(50 - 35 =) 15$  maunds ; while B grade land also begins to show a surplus of  $(45 - 35 =) 10$  maunds, which is its economic rent.

In course of time, D grade land will also come under cultivation. Suppose its yield is 20 maunds only. It will raise the surplus or economic rent of A grade land to  $(50 - 20 =) 30$  maunds; of B grade land to  $(45 - 20 =) 25$  maunds ; and on C grade land, rent will begin to appear to the extent of  $(35 - 20 =) 15$  maunds.,

In the diagram on page 360 OA, AB, BC, and CD, are A grade, B grade, C grade and D grade lands respectively. The application of an equal outlay on each of them gives an yield which is measured along the given scale and is represented by the rectangles standing just above the respective bases. CD is the no-rent land and does not yield any rent. All the other plots yield economic rent equal to the shaded portion of their respective rectangles.

### Marginal or No Rent Land

From the above discussion, it is plain that the no-rent or marginal land plays an important role in the determination of the economic rent. It is called No-Rent Land because its expenses of production (excluding rent) are just equal to the price of its produce so that it cannot afford to pay rent. Being on the margin of cultivation, it is also called marginal land. The following important points must be remembered with regard to the marginal land :

(1) It has a decisive influence on rent. Its yield forms the base from which economic rent on super-marginal land is calculated.

(2) Market price of the agricultural produce is equal to the cost of production on the marginal land. It could not be less than the cost of production ; otherwise the crop will not be produced at all—the marginal land will remain idle. Nor could it be less than the cost of production ; otherwise a lower grade land will be brought under plough and the marginal land will become super-marginal land.



(3) Marginal land is not fixed. It is, on the other hand, very sensitive to variations in the price of agricultural produce. As soon as the market price goes up, the hitherto marginal land becomes super-marginal, and the hitherto sub-marginal land becomes marginal. On the other hand, if price goes down, the marginal land goes out of cultivation, a super-marginal land becoming marginal.

### The Intensive Form of the Theory of Rent

In the above discussion we have exposed the theory of rent as applied to land cultivated extensively. The theory is also applicable to the land cultivated intensively. When the land is inten-

sively cultivated, the yield due to successive dose of labour and capital goes on diminishing till a stage is reached when the cost of the final dose is just equal to the price of the yield it grows. This is the marginal or no-rent dose. The produce due to all other doses exceeds that of the marginal dose. The surplus or the differential advantage thus appearing is the economic rent.

The diagram given above can also be used for explaining the intensive form of the theory of rent. Suppose the yield due to the application of the first dose of labour and capital to a plot of land is 50 maunds ; that due to second dose, 45 maunds ; that due to the third dose, 35 maunds ; and that due to the fourth and final dose, 20 maunds. The rent in the case of first three doses is 30 maunds, 25 maunds and 15 maunds respectively, the fourth dose being no-rent dose.

OA, AB, BC and CD represent the four doses and the rectangles standing over them represent the yield due to each of them. The shaded portions of the rectangles over OA, AB and BC represent the surplus or the economic rent. Note that no rent arises in case of the marginal dose, CD.

An important point that arises from this discussion is that rent will arise even if all the land was of uniform quality. In such a case, extensive form of cultivation will not of course give rise to rent ; but if the pressure of population necessitates intensive cultivation rent will arise as shown above.

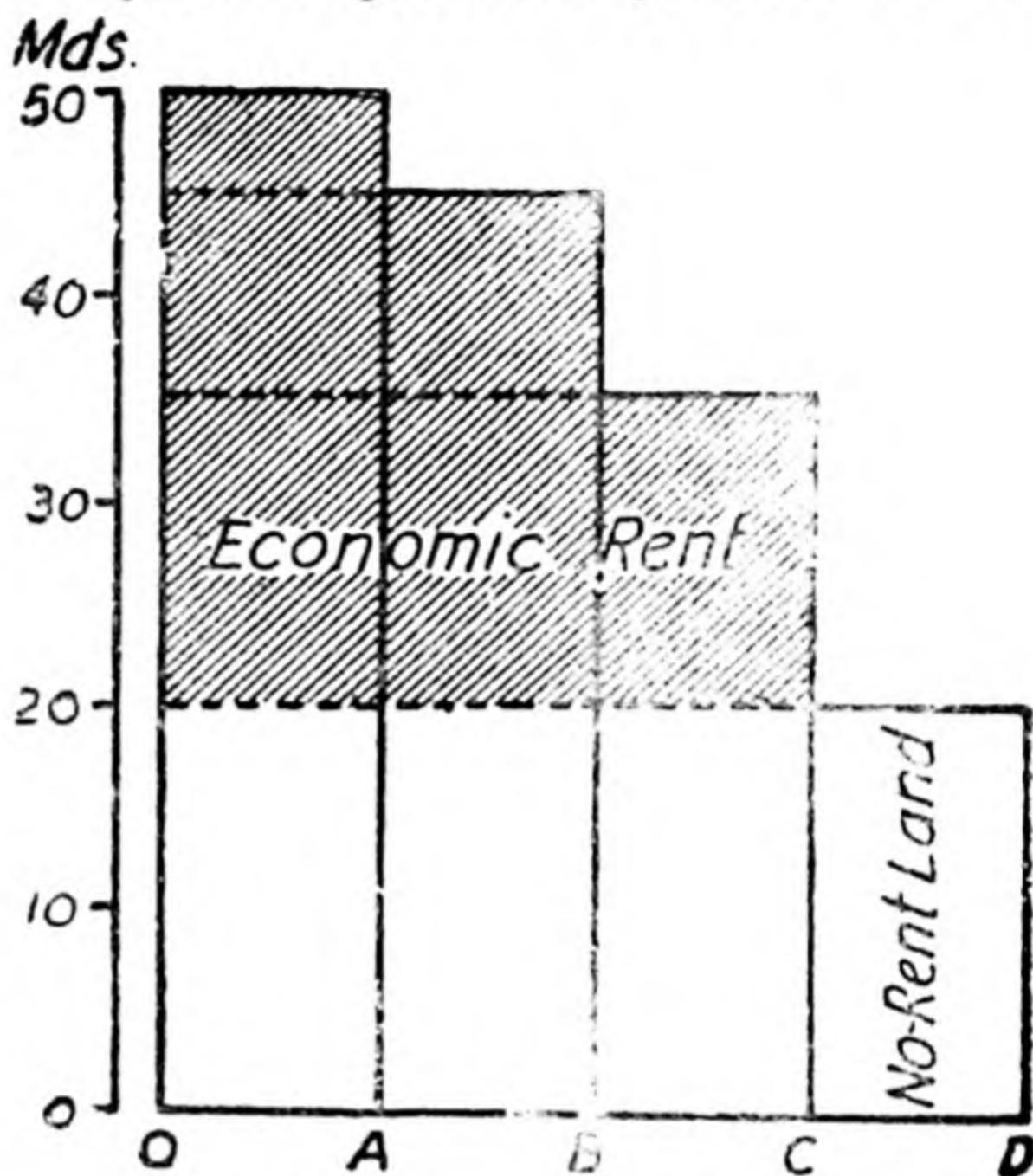


Fig. 45. Showing the origin of rent.



## Criticism of the Theory

Ricardian Theory of rent has been criticised on many grounds. The following are the main points of criticism :

(1) Ricardo maintains that rent is paid for "use of the *original and indestructible* powers of the soil". This expression is not very accurate. The powers of the soil, for which rent is paid, are not always original ; in some cases they are acquired. Again fertility, which is one of the most important parts of the soil, is destructible.<sup>8</sup>

(2) His theory is said to be historically false. He said that the best land is first put under plough and later on land is picked up for cultivation on the merit of its goodness. It has been said against this contention that the order of cultivation is just the reverse ; men proceed from inferior to superior land. But the contention of the critics is, in the first place, not free from doubt. Even if it were correct, it must be realised that Ricardo's historical order of cultivation is not of the essence of his theory. It is simply an illustration, a method of putting a thing. What he wants to show by this historical illustration is that different points of land differ in quality. And this, of course, is true.

(3) The most damning criticism against the Ricardian Theory is that it is thoroughly hypothetical and unrealistic. The assumption of perfect competition, on which the theory stands, is unreal ; it does not exist in practical life. And it makes the theory unrealistic too.

(4) Finally, it is said that no-rent land does not always exist. If a country is very thickly populated, even the worst land might bring some rent. This is true to certain extent. But, if the market extends beyond the national boundary, no-rent land may exist in some other country supplying the same market. Even if we suppose for the sake of argument that no-rent land does not exist anywhere in the world, no-rent dose must exist somewhere. And if so, it may be said to determine rent.

The conclusion is that the purport and the principles underlying Ricardo's theorization are quite correct on the assumption of perfect competition. The moment that assumption is taken away, his theory becomes inapplicable and it is the theory of contract rent which begins to apply.

### § 5. RENT AND PRICE OF AGRICULTURAL PRODUCE

The relation between rent and price has been a fond theme of economists. The question is often asked, whether the rent paid on land affects the price of agricultural produce or not ; so that if rent is increased or decreased, whether the price will behave similarly as a consequence or not. The answer was given by Ricardo long ago. He showed that rent does not determine price ; on the other hand, it is itself determined by price.

<sup>8</sup> Some economists defend Ricardo by stating that except fertility, other qualities of land like climate, extent and configuration are certainly indestructible. This statement, though correct, does not take away the force of the criticism.



## Rent Does Not Determine Price

The fact that rent does not determine price becomes clear if we take into consideration two fundamental facts : (1) Firstly, the price of agricultural produce equals the expenses of production on the marginal land. If the price exceeds the expenses of production, even inferior land will be brought under plough and the existing marginal land will cease to be the marginal land. On the other hand, if the price is less than the expenses of production, the cultivation of this land will become unprofitable and will, therefore, be given up. Thus it will, again, cease to be the marginal land. As such, *the price of agricultural produce must be equal to the expenses of production on marginal land*; it can neither be more nor less. (2) Secondly, the marginal land (or marginal dose) does not yield any rent because its produce is only just sufficient to cover the expenses of production excluding rent. Evidently rent does not enter into the expenses of production on marginal land.

Summing up these two facts, we may say that the *price of the agricultural produce equals the expenses of production on the marginal land, which does not include the item of rent*. Obviously the price of the agricultural produce is in no way affected by rent. Rent does not exert any determining influence on the price of agricultural commodities.

There is, however, an *unscientific sense* in which rent may be said to enter into price. We might say that rent enters into price inasmuch as it is paid by the cultivator of superior land *out of the price* which he gets for his product. But it does not enter into price in the sense, which is the correct and the scientific sense, that it determines the price, or that it is one of the elements of the cost which determines the supply price of anything.<sup>9</sup>

## Price Determines Rent

In fact, rent itself is determined by the price of agricultural produce. If the price of the agricultural produce goes up, it becomes possible to cultivate a sub-marginal land : the margin of cultivation having gone down, rent increases as a matter of course. A fall in the price of agricultural produce creates an opposite effect. It makes the cultivation of the marginal land unprofitable with the result that a super-marginal land now becomes marginal land. By thus pushing up the margin of cultivation, it reduces rent. Rent in this way varies with the price of agricultural produce.

## Effect of Rent Remission on Price

Since rent does not affect the price of agricultural commodities, any reduction in it will fail to bring down prices. Even if rent is altogether remitted by landlords, the price of agricultural produce will remain unaltered. So long as the marginal land and the expenses of production on that land remain the same, price will also remain unchanged.

By the same reason, it can be easily shown that if rent is increased

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<sup>9</sup> Thomas, *Elements of Economics*, p. 251.



manifold, the price will remain the same. As Ricardo said, corn is not high because a rent is paid but a rent is paid because corn is high. Rent is not a component part of the price of commodities.

### **Exceptions : When Does Rent Enter into Price?**

There are, however, certain exceptional cases in which rent does enter into the price of agricultural produce. Ordinarily it does not enter into price because it is not an element of marginal expenses of production. In the following cases, rent does become an element of the marginal expenses and, therefore, enters into the price of the produce :

(1) If the State, or a body of landlords, has a monopoly of land, it may charge rent even on the marginal land. If so, rent will constitute a component item in the marginal expenses of production and will affect price. In some under-developed countries, the State, which enjoys the monopoly of landownership, charges rent even on no-rent land ; therefore, rent enters into price of agricultural produce in such countries.

(2) Where cultivators have no other occupation except agriculture, competition amongst them becomes so keen as to make them pay rent even on the marginal land. Here again rent enters into price. This is the case in India.

(3) When a land which is super-marginal with reference to one crop, is devoted to another crop with reference to which it becomes marginal, the old rent continues to be paid. For instance, a plot of land may be super-marginal and productive of rent when devoted to wheat ; but if it is now devoted to the production of, say, barley, it may become marginal and incapable of yielding any rent. Still the old rent will be charged. Here then rent will enter into marginal expenses of production and, therefore, in price.

### **§ 6. FACTORS AFFECTING RENT**

We have seen that price determines rent. Consequently all those factors which affect the price of agricultural commodities necessarily influence rent. Improved transport, agricultural improvements, increase in population and general advance in civilization, are the most important of them.

#### **Effect of Improved Transport**

Improvement in the means of transport affects agricultural prices and the rent of a particular land according to the nature of the tract with which it is now connected either for the first time or with greater facilities than before :

(a) If the new tract, made accessible by the improved means of transport, effects comparatively high prices for agricultural produce, rent will tend to increase. For instance, the revolution in the means of transport during the 19th century enabled the American farmers to send wheat to England where it was sold at fairly high prices. In America the demand for land went up ; sub-marginal lands became



marginal lands in quick succession ; and rents increased by leaps and bounds.

(b) If the new tract of land made accessible by improved means of transport, is a new source of supply of cheap agricultural commodities, rent will tend to fall. For instance, when America began to supply wheat to England in the 19th century at cheap prices, much land in England went out of cultivation ; super-marginal lands became marginal, and then sub-marginal in quick succession ; and rents decreased.

### **Effects of Agricultural Improvements**

Improved methods of cultivation lead to the production of increased quantity of produce from the total land under cultivation. The demand for agricultural commodity remaining unaltered, their price will obviously shrink. The marginal land will go out of cultivation, it will become sub-marginal, and rents in general will fall. Rent arises as a result of the operation of the law of diminishing returns and, other things being equal, any factor retarding its operation, as is the case with agricultural improvements, lowers the rents. If, however, the demand for agricultural produce goes up, consequent upon a fall in the price of agricultural commodities, the shrinkage in rent may eventually be restored.

We cannot in fact be very definite about the effect of agricultural improvements on rent. Some economists hold the view that these improvements benefit poor land more than rich land; the latter already yield fairly heavy crops so that there is little incentive to increase their produce further ; while the low yield of the poor land constantly offers incentive. As such, agricultural improvements generally increase the output of poor land and tend to level the productiveness of the soil of different grades. If this point of view is correct, rent will tend to fall. In fact, "the irregularity of the applications of improvement causes varying effects on rent, and all that we can do is to indicate broad tendencies."<sup>10</sup>

### **Effect of Increase in Population**

An increase in population raises rent. Increased population means greater demand for agricultural produce, which can be satisfied by forcing down the extensive or intensive margin of cultivation ; in other words, by cultivating a hitherto sub-marginal land or by applying more dose of labour and capital to the existing cultivated land. In any case, the surplus or differential advantage of super-marginal lands, will increase and rents will go up. Moreover, as population increases, land will be required for such non-agricultural purposes as the construction of houses and factory-buildings, bazars and streets, etc. The rental value of land will rise due to this factor as well.

### **Effect of an Advance in Civilization**

The consequences of an advance in civilization are similar to

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<sup>10</sup> Thomas, *Elements of Economics*, p. 256.



those of an increase in population, namely, rent tends to rise because (1) the improved standard of living requires more expensive varieties of food and clothing, thus increasing the demand for agricultural land; and (2) the demand for land for non-agricultural purposes like parks, play-grounds, etc., also goes up. Rent rises as a consequence.

## § 7. RENT OF BUILDING SITES, MINES AND FISHERIES

### Rent of Building Sites

The rent of building sites is determined on the same principles on which the rent of agricultural land is determined. It may, however, be noted that the rent of the agricultural land depends upon its *fertility* and *location*; but in the case of building sites, location alone is important. In the case of building for residential purposes, situational advantage consists in the natural beauty, fashionableness, healthfulness and conveniences of the site in question. The goodness of the site for buildings for business purposes depends upon its attractiveness, frequency and number of customers passing before it, adjoining shops, etc. Thus the rent of building sites, whether for residential or business purposes, is always the *situational rent*.

But this difference does not alter the principle by which rent is determined. At any particular time, there is in existence a no-rent waste land which is useless for building purposes. There are many other sites distinctly superior to it for building purposes. The differential situational advantage of super-marginal building site over the marginal one, is the measure of its economic rent. Rent of building sites is highest in the heart of the city and goes on diminishing as the distance from the centre increases.

### Rent of Mines and Quarries

The total payment made for a mine in the shape of rent consists of two parts : (1) Payments made for the minerals removed which are not replaced, called *Royalty*. In agricultural land, it may be noted, no such payment is made for the fertility of the soil which, if properly used, is inexhaustible. (2) Rent Proper, which is paid for differential advantages in respect of ease of working and convenience of situation, called *Mine Rent*.

Royalty has no semblance to agricultural rent; it is, however, the mine rent which resembles it so closely inasmuch as the margin may be lowered *extensively* by the working of less convenient or interior mines, and *intensively* by the application of more resources in the superior mines.<sup>11</sup> At any particular time there is a marginal or no-rent mine which is so difficult to be worked and so inconveniently situated that it pays no mine rent. All other super-marginal mines pay rent equal to the differential advantage.<sup>12</sup>

<sup>11</sup> Thomas, *Op. Cit.*, p. 259.

<sup>12</sup> This is Marshall's view. It is difficult to agree with him that royalty is not analogous to agricultural rent. Fertility, unless replaced by certain methods, is definitely exhaustible. And if so, the analogy between agricul-



## Rent of Fisheries

It is maintained by many economists that with proper care fisheries yield a perpetual return, as happens in the case of agricultural lands. As such, the analogy between agricultural land and fisheries is perfect and rent of fisheries is determined in the same way as that of agricultural land. No-rent fisheries yield no rent ; the differential advantage of all the super-marginal fisheries measures the rent.

### § 8. UNEARNED INCREMENT

The value of land increases if the landlord effects improvements in it. Sometimes the value goes up due to the operation of certain social factors and without any effort on the part of the landlord. For instance, if a town grows up around a plot of land or if it is connected with the surrounding areas by efficient means of transport and communication, the value of land is bound to increase. Such increase in value due to the operation of certain social factors and without any effort on the part of landlord, is known as *unearned increment*.

Unearned increment is not the fruit of the labour of the land-owner ; it is the consequence of certain social causes. As such, it should not be allowed to be enjoyed by the landlord but should be spent for the welfare of the society as a whole through the agency of the State. The government may take away this increment : (1) *through taxation*. An unearned increment in value may be lopped off by the Government by the imposition of a tax ; or (2) *through land nationalization*. The entire land may be nationalized, *i.e.*, put in the ownership of the State so that any unearned increment appearing on the land might automatically benefit State finances. This opinion is held by many economists and is particularly advocated by socialists of all shades of opinion.

### INTERMEDIATE QUESTIONS

1. Explain the Ricardian Theory of Rent, and examine the relation between rent and price. (Andhra, I. A., 1950).
2. "Rent is unearned increment and hence the State can appropriate it." Comment. (Andhra, I. A., 1944).
3. Explain the Ricardian conception of rent, and discuss how far it is applicable to the earnings of factors of production other than land. (Bombay, I. Com., 1948).
4. "Corn is not high because rent is paid but rent is paid because corn is high." Discuss. (Karachi, I. Com., 1952).
5. Define Rent. Why does it arise ? How is the economic rent of an agricultural land determined ? (M. B., I. A., 1952).
6. Define Economic Rent, and explain the factor on which the rent of agricultural land depends in India. (M. B., I. Com., 1953).
7. "Rent does not enter into the expenses of production." Elucidate. (M. B., I. Com., 1952).

tural rent and gross rent of mine is complete. Taussig's unwillingness to accept Marshall's views that even the poorest mine will yield some return to the owner of the mine for the minerals removed, seems to be just from the point of view of theory.

8. Explain as clearly as you can the Ricardian theory of rent. Indicate the qualifications to which it is subject. (Osmania, I. Com., 1952).
9. Define economic rent. How is it determined? (Patna, I. A., 1951).
10. Explain the nature of economic rent. How is it determined? (Poona, I. A., 1949).
11. Discuss the Ricardian Theory of Rent. (Poona, I. Com., 1950).
12. Define Economic Rent. How does it arise? Does it form a constituent part of price? (Poona, I. Com., 1949).
13. Fully discuss the Ricardian Theory of Rent. (Raj., I. A., 1952).
14. (a) Distinguish between Economic and Contract Rent. (b) "Rent is not a thing by itself but a leading specie of a large genus." Explain. (Raj., I. A., 1951).
15. Why does Rent arise? Establish the proposition: "Rent on land is not an element in the price of agricultural produce." (Raj., I. Com., 1953).
16. Define the term Economic Rent. Explain carefully the effects of the following on rent of agricultural lands: (a) improved methods of cultivation. (b) improvement in the means of transport. (c) increase in population. (Raj., I. Com., 1951).
17. Explain the theory of economic rent. What factors enter into the determination of rent in India? (Travancore, Inr., 1943).
18. Explain rent and examine the effects of pressure of population on the rent of land. (Utkal, I. Com., 195).
19. Explain the Ricardian Theory of Rent and state the relation between Rent and Price. (Utkal, I. Com., 1951).



## CHAPTER 50

### WAGES

It is not to be understood that the natural price of labour estimated in food and necessities is absolutely fixed and constant. . . . . It essentially depends on the habits and customs of the people.—*Ricardo*.

#### § 1. INTRODUCTION

#### Meaning of Wages

A wage is a price: it is the paid price by the employer to the worker for the labour performed by him (*i.e.*, the worker). It may, as such, be defined as the price paid by an entrepreneur to the labourers employed for productive purposes. It may also be defined as the share of the national dividend which accrues to labour (in the broad sense of the term), including all kinds of workers whether they receive salaries, pays, or wages ; whether they are paid annually, monthly, weekly or daily ; whether they are skilled or unskilled ; whether their work is manual or mental.<sup>1</sup>

#### Two Doubtful Cases

There are two doubtful categories of labourers whose remuneration is called wages by some and excluded from this class of income by others. The first is the case of those entrepreneurs who take part in superintendence and management of an undertaking. In so far as they themselves superintend and manage the business, they work as organisers and are entitled to a salary. For if they do not themselves do this work, they will have to employ an organiser and pay him a reward. Therefore, any payment made to them, directly or indirectly, is obviously of the nature of wages. The second class is constituted by independent workers like teachers, doctors and lawyers. They undergo some physical or mental exertion and receive a reward for their labour, usually called fee. Some economists are of the opinion that this remuneration should be put under wages. But others do not agree with this opinion because the services rendered by these persons are sold to consumers directly, and not to producers as is the case with labour ; hence their reward is usually classed by them under profits and falls outside the scope of wages. But this distinction is rather superficial. Their reward should also be treated as wages.

#### Wage, Pay and Salary

The remuneration given to labourers is known by different

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<sup>1</sup> Labour is a wealth-creating effort—J. B. Clark, *Essentials of Economic Theory*, p. 9. Any human exertion directed primarily towards the creation of utility, is labour. Although the work of a child at school may create "productive power", the immediate end not being production, it is not economic labour. "The remuneration of labour." (Seligman, *Principles of Economics*, p. 411), "the earnings assigned to men for their work" (Seager, *Introduction to Economics*, p. 222) in other words, the recompense of human exertion in the production of utility, is wages.—F. H. Streightoff, *The Distribution in the United States*.



names according to their status and the time of its payment. The remuneration paid daily, weekly or fortnightly is called *wage*; that paid monthly is known as *pay*; while that paid yearly is called *salary*<sup>2</sup>. There is no technical difference in the nature of wages, pays and salaries, all being the earnings of labourers. But from the point of view of social status and prestige of labourers, this distinction is very important. Wages are usually given to ordinary unskilled labourers who live from hand to mouth and who belong to the lower stratum of society. Pay is given to middle class persons like teachers, clerks, organizers and ordinary officials who hold a higher social status than the wage earners. Salaries are given to high Government dignitaries and well-paid organizers who constitute rich section of the society. Wages are less than pays and pays are less than salaries. The differences in these incomes are wide in the present-day capitalistic economy. These inequalities have given rise to much hard thinking and a movement, aiming at levelling up incomes as much as possible, has been started under the name of Socialism.<sup>3</sup>

### The Problem of Wages

Of all the branches of Economics, Distribution is the most difficult and the most important section ; and of all the problems of Distribution, the problem of wages is the most difficult and the most important problem. It is the most difficult because labour being inseparable from labourer, the human element enters into consideration more definitely at this stage than in any other phase of our enquiry ; and the interference of non-economic elements with the operation of the economic ones has always to be faced with. It is the most important problem of our investigation because it concerns the class of society which has the greatest numerical strength and which generally speaking, is most dissatisfied with the present-day economic organization of society.

#### § 2. DETERMINATION OF WAGES

Wage, we have said, is the price of labour. We have now to discuss how the price of labour is determined. The price of an ordinary commodity is determined by demand and supply. If labour be regarded as a commodity, the same theory of value will apply to

<sup>2</sup> See Benham, *Economics*, page 17 : Batson *Practical Economics*, page 48. In this context the term *wage* has been used in the narrow sense. In the broad sense, in which it is generally used, it includes all the three types of remuneration mentioned here.

<sup>3</sup> The question of inequality of incomes is very important and may be studied from a number of elementary books like Clay, *Economics for the General Reader*, Batson, *Practical Economics*, etc. The following is an explanation of the inequality of wages. Wages depend on productivity, and productivity depends on ability, training and equipment in the widest sense. Ability varies ; training is too expensive for the poorest workers, so that the difference between skilled and unskilled wages is not wiped out by a flow of labour from unskilled to skilled occupations : and the comparative efficiency of equipment as between industries is, constantly varying ; while mobility between industries and places is checked by ignorance, inertia and the fear of losing the advantages of specialized skill.—Scott, *The Approach to Economics*, pp. 125-130.



wages as well. But labour differs from an ordinary commodity in several respects which necessitate modifications in the general theory of value when applied to wages.

### Peculiarities of Labour

The following are the peculiarities of labour as a factor of production.

#### (1) *The Worker Sells His Work, But Retains Property in Himself.*

The first peculiarity of labour is that labourers are not bought and sold as machinery and other material agents of production. The worker sells his work or labour power for a definite number of hours for an agreed wage, but he does not sell himself. There was a time when a worker could even sell himself. The purchased worker was called a *slave*. But slavery has now been abolished from every country of the world. In this respect, labour differs from land or capital; for both land and capital can be bought but labourer himself cannot be bought—only his labour power can be purchased.<sup>4</sup>

#### (2) *Labour Cannot be Separated from the Labourer.*

The labourer has, therefore, to present himself at the place where labour is required. This is not the case with other factors of production. Land can be separated from the landlord; capital, from the capitalist. Landlords and capitalists can remain in their homes, but their land and capital can be used thousands of miles away. But labourer must go where labour is to be supplied. Due to the inseparability of labourers from labour, various personal factors affecting the former affect the supply of labour, and have to be considered when discussing wages—a fact

<sup>4</sup> This fact stands in way of education and training of workers. Money can be spent on their education either by themselves or by employers. They themselves cannot afford to do so on account of their poverty except in isolated cases. Their ability to look sufficiently ahead and to realise the importance of sacrificing the present pleasure for the welfare of their children, is another obstacle. The employer does not also like to spend money on the education of workers because by so doing he cannot own workers—workers after education would be their own masters and would be free to work for any employer. As against this, if an employer spends money on buildings, machinery etc.; he can reap full benefit of such an expenditure as these things are his property. As Marshall aptly observes: 'Those who bear the expenses of rearing and educating the worker receive but very little of the price that is paid for his services in later years. As such the investment of capital in the rearing and early training of the workers is limited by the resources of parents, by their power of forecasting the future and by their willingness to sacrifice themselves for the sake of their children. The evil is of little importance in the higher industrial grades. For in those grades, most people distinctly realize the future; they exert themselves much to select the best careers for their sons; and they are able and willing to incur a considerable expense for the purpose. But in the lower ranks of society the evil is, indeed, great. For the slender means and education of the parents and the comparative weakness of their power of distinctly realizing the future disable them from investing much capital in the education and training of their children. Unfortunately this evil is cumulative. The worse fed and the less will be their power of providing adequately for the material wants of their children, while the less fully their own faculties are developed, the less will they realise the importance of developing best faculties of their children.—Marshall, *Principles of Economics*, VI. iv. 2.



which makes the problem of wages a hard nut to crack. For instance, labour is not so mobile as say capital, because its mobility depends upon the mobility of the labourer, which is hindered by a long list of personal considerations like love of home, attachment to associates, etc. These personal obstacles are, of course, absent in the case of other factors of production.

(3) *Labour Power is Very Perishable.* If a merchant does not sell his commodity today, he hopes to be able to sell it tomorrow. But if a labourer does not work on any particular day, the labour power of that day perishes for ever and cannot be regained. Due to this fact, labourers prefer to sell their labour power at any price on any particular day rather than wait and let it perish irrevocably. The consequence is that the bargaining capacity of labourer is weakened and wages are depressed.

(4) *The Supply of Labour Increases and Decreases Very Slowly.* If the demand for an ordinary commodity increases, its price rises and it begins to be produced in increasing quantity. This is not so with labour. If the demand for any particular type of labour increases, its supply can increase in the following two ways : (a) Parents may train their children for that work. This will take considerable time and the supply will increase only slowly. (b) Labourers from other channels may be attracted towards this line by the offer of high wages. This latter alternative is not free from difficulties. The mobility of labour is a difficult process and cannot be relied upon as a quick measure. Moreover, the mobility might only shift the problem of the scarcity of labour from one grade or industry to another grade or industry.

What is true of an increase in the supply of labour is also true of a decrease in its supply. Labour of any particular grade or industry can decrease through natural death of labourers, or its mobility to other grades or industry. The first one takes time and the second one is unreliable, besides being slow.

We conclude, therefore, that the supply of labour adjusts itself to changes in demand only slowly.

(5) *The Bargaining Capacity of Labourers is Weaker Than That of Employers.* The rate of wages is determined by the bargain made between the employer and the labourer. Each is *supposed* to be perfectly free to consider his own economic interest, though as a matter of fact nearly always in the course of the world's history the master has had the advantage and the workman has been less free to strike his bargain. This is due to a variety of reasons : (a) Labour power, as we have seen, is perishable. The labourer prefers to sell his labour power for any price whatsoever rather than to remain idle and lose it for ever. (b) Labourers are generally poor and have no resources to fall back upon, if they like to wait in the higgling and bargaining with the employers. They live from hand to mouth ; and in order to earn their bread for tomorrow, they must work today at any remuneration whatsoever. Employers know it thoroughly well and make its unscrupulous use to their own advantage. (c) In the olden days if labourers could not



get employment, they could themselves produce goods and sell them in the market. But most of these handicrafts have now decayed in the face of the competition of factory goods. The bargaining capacity of labourers has been considerably weakened. (d) Labourers lack organisation. Trade unions, such as they are, are little developed, include only skilled labourers and suffer from many defects and obstacles. Hence they do not always offer an effective resistance against the exploitation by employers. (e) Sometimes wages are paid according to some old-established custom and are fairly low. Since custom does not easily change, wages do not easily increase. (f) Even if there are chances of getting high wages at some particular occupation, labourers do not get the information. Their ignorance is a great obstacle in the way of high wages. (g) Finally, a rapid rise of population is creating a class of the unemployed, of increasing dimensions, which is a fruitful cause of low wages.

### The Theory of Wages

The modern theory of wages is substantially the same as theory of value, subject to certain reservations necessitated by the peculiar characteristics of labour discussed above. According to this theory, wages are determined by the interaction of the forces of the demand for labour and its supply.<sup>5</sup>

*The Demand for Labour.* Labour is demanded by employers who use labourers in the act of production. A labourer is engaged for producing goods (or value); and whatever contribution he makes to total output or production is called his *productivity*. This productivity can be measured in terms of money. It has been found by experience that the productivity of every successive or additional labourer goes on declining as more and more labour is employed, provided the quantity of other factors is not changed. The productivity of labour thus resembles the utility of a commodity, which also diminishes with an increase in its supply.

Now, when an employer considers whether or not he should employ one more labourer, he compares the productivity of the additional worker with the wage he will have to pay him. If his productivity exceeds the wage, he will employ the worker. He will go on employing labourers till the productivity of each additional labourer exceeds the wages paid to him. In course of time a point will be reached where the productivity of the last or the marginal labourer employed just equals the wages he is paid. Such a worker is on the *margin* of employment or dismissal: he contributes as much to production as he gets in the shape of wages; and the employer is, therefore, indifferent whether he is employed or not. He is, therefore, called the *marginal* or *final* worker, and will be the last worker employed by the em-

<sup>5</sup> The explanation of price by Supply and Demand also holds good for labour, which is certainly a commodity although it is supplied and sold in a special way. The price of labour is not, of course, the same thing as the earnings of labourers. A person's earnings depend partly on the price of his labour, and partly on the quality of it that he sells."—Batson, *Practical Economics* p. 27.



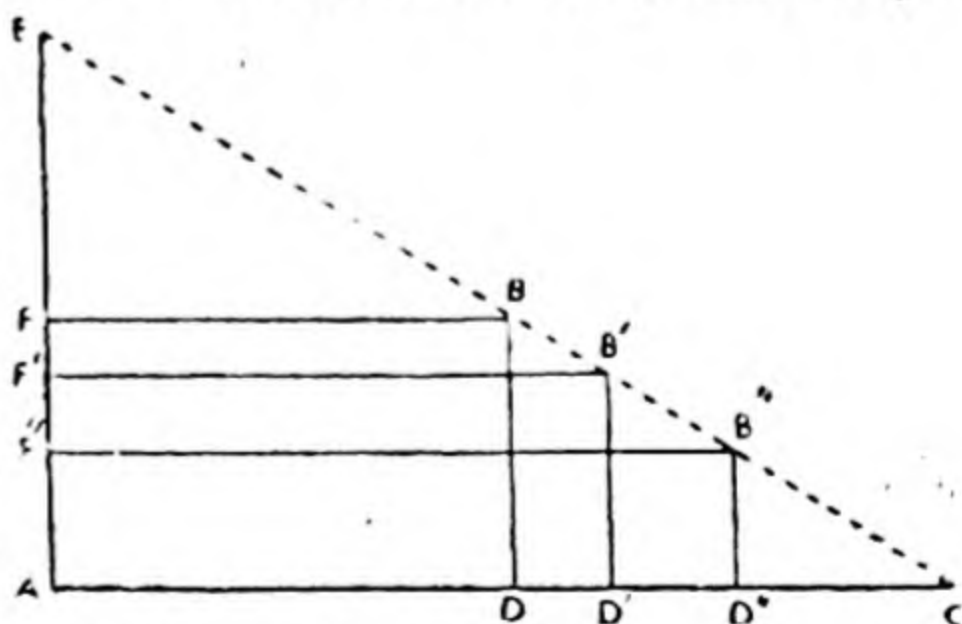
ployer. The productivity of the marginal or final worker is known as *marginal* or *final productivity*.<sup>6</sup>

It is thus clear that the wage which the employer will be prepared to pay to the marginal labourer will be equal to the marginal productivity. It cannot exceed marginal productivity since the employer will suffer a loss in that case.

Now, when we are considering a great body of labourers, we may safely assume that all the members of the group are equally efficient and each is interchangeable with the other. Consequently the same wage will be paid to each of them. This will be the wage which is paid to the marginal labourer. Since the wage paid to marginal labourer is equal to the marginal productivity, it follows that the marginal productivity sets the demand price for labour.

*The Supply of Labour.* Just as the employer (or buyer of labour) has a maximum, similarly the labourer (or seller of labour) has his minimum. The labourer's minimum limit is set by his standard of living, *i.e.*, the amount of necessities, comforts and luxuries which he is accustomed to enjoy and which he will insist upon having. Wages must at least be equal to the cost of his standard of living; the labourer will not accept a wage which is lower than the cost of living. If lower wages are offered in spite of the resistance of workers, they will seek to maintain it by such methods as deliberate postponement of marriage or life-long celibacy, mobility to other trades or localities where higher wages are obtainable, acquisition of greater efficiency or combination of workers and refusal to work at all except at adequate wages as determined by their standard of living. Such devices will push up the wage to the cost of living in course of time. The standard of living of the worker thus sets the minimum limit below which wages cannot fall.<sup>7</sup>

**6 Measurement of Marginal Productivity.** Marginal productivity of labour can be measured in terms of money by finding out the increase in the income of a firm if one more labourer is employed. For instance, suppose a mill employing 1,000 workers, engages one more worker (*i.e.*, 1,001 in all) while keeping other productive resources fixed; and its income rises by Rs. 30. Then the marginal productivity of labour will be Rs. 30. This marginal productivity goes on declining with the employment of every additional hand, as has been clearly shown in the adjoining diagram. BC is the marginal productivity curve; and its downward slope represents its consistent fall with the employment of additional labour. AC represents number of workers employed and AB represents productivity in terms of money. When AD labour is employed; marginal productivity is BD. But if labour employed is increased to AD, the marginal productivity is reduced to BD. If labour employed increases to AC, marginal productivity will fall to zero.



**7** The standard of life in the case of labour replaces the *expenses of production* in the case of ordinary commodities, but it will be appreciated that the



*Interaction of Demand and Supply.* Between these two limits, the maximum limit as set by the marginal productivity of labour and the minimum limit as set by the cost of living of workers, wages are determined by the relative bargaining strength of labourers and employers. In actual practice, the bargaining strength of a labourer is very weak. Wages, therefore, tend to approximate the cost of living rather than the marginal productivity.<sup>8</sup>

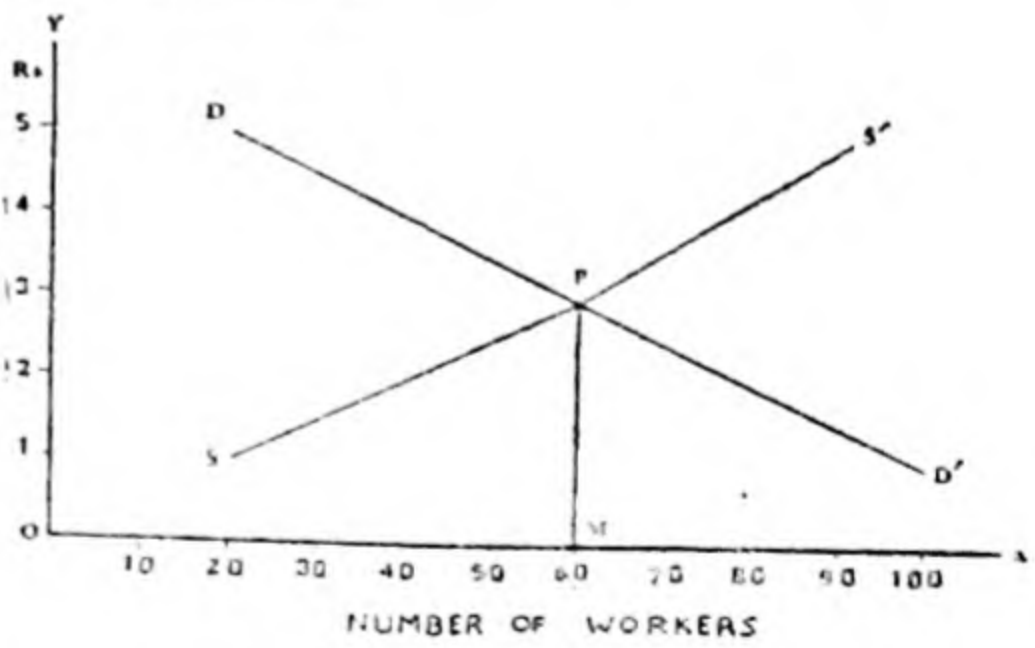
**Illustration and Diagram**

Suppose, a mill-owner demands labour at different wages as shown in the table given below. As wages rise, demand for labour

Wage (Rs. daily.)	Demand (No. of wor- kers de- manded.)	Supply (No. of wor- kers ready to work.)
1	100	20
2	80	40
3	60	60
4	40	75
5	20	90

declines. Labour is supplied by workers ; and, as is clear from the adjoining table, the supply of labour increases with an increase in wage rate. When the wage rate is Rs. 3 per day, the demand for labour equals the supply thereof. Hence this is the point of equilibrium ; and this would be the wage that would prevail.

We can represent the above illustration diagrammatically. The number of workers has been measured along OX-axis, and wages (Rs.) along OY-axis. DD' is the demand curve for labour, and SS' is the supply curve for labour. They intersect at the point P. As such, PM would be the wage rate ; and OM would be the number of labourers who would be employed.



Number of workers.

standard of life is in many respects analogous to the cost of production of a commodity, because the standard of life is a measurement of sacrifice made by the worker in order to bring up the family, i.e., in order to increase the future supply of workers.—Thomas, *Elements of Economics*, p. 277.

<sup>8</sup> In the case of an ordinary commodity, the long-period price approximates expenses of production ; and short-period price, the marginal utility. Similarly, some economists assert that wages tend to approximate standard of living in the long period and marginal productivity in the short period. This view appears to me far from accurate. In the case of a commodity there is the assumption that the bargaining strength of both the parties is equal. But such an assumption will be out of place in the case of labour. Hence the analogy pursued by the advocates of the above view seems to be unwarranted.

## Old Theories of Wages

The above theory of wages is known as the Modern Theory or the Demand and Supply Theory of Wages. Economists in the past had propounded a number of theories of wages, the most important of which are (1) The Subsistence Theory or the Iron Law of Wage, (2) the Wages Fund Theory, (3) the Residual Claimant Theory, and (4) the Marginal Productivity Theory. All these theories have now been discarded and the modern theory claims the largest number of adherents. But even this theory is not free from defects and we have yet to wait for an economist who can solve this riddle.

### § 3. WAGES, EFFICIENCY AND STANDARD OF LIVING

Wages and standard of living are closely connected with each other and act and react upon one another through the medium of the efficiency of labourers.

(a) Let us begin with *the standard of living*. Suppose the standard of living of workers goes up. They will now be able to satisfy their wants more adequately, both qualitatively and quantitatively. Their efficiency, physical and intellectual, will increase. An increase in efficiency necessarily means an increase in productivity. The maximum limit up to which wages can go will thus increase. Again, standard of living determines the minimum below which wages cannot go. As such, a rise in standard of living also implies an increase in the minimum rate of wages. The maximum and minimum limits having thus gone up, wages are likely to increase.

If the standard of living goes down, opposite results will follow. Efficiency of labourers will go down. Their productivity will decrease. The maximum limit up to which wages can rise, will go down. The maximum limit up to which wages can fall, will also decrease since it is the standard of living which determines this minimum, other things remaining the same. When the maximum and minimum limits are pushed down, wages are likely to be depressed.

(b) Let us now look at the relationship *from the standpoint of wages*. If wages go up, labourers will be able to satisfy their wants more richly and their efficiency will rise. Their productivity will also increase. The maximum limit of wages will thus go up. At the same time, higher wages imply higher standard of living which pushes up the minimum limit of wages. The minimum and maximum having thus increased, wages are sure to rise.

If wages fall, opposite results will follow. Efficiency will go down ; productivity will fall as a consequence. Maximum limit of wages will thus be pulled down. At the same time, standard of living will decrease and the minimum limit will be depressed. Wages will, therefore, fall.

(c) We shall now consider the case *from the point of view of efficiency*. If somehow labourers increase their efficiency, their productivity will go up. Their wages will rise as a consequence. And



they will increase their standard of living. The results following in the case of a fall in the efficiency are just the reverse.



Fig. 46. Showing the relationships between standard of living, efficiency and wages.

From the above discussion two conclusions emerge. Firstly, labourers can increase their standard of living by making themselves more efficient, other things remaining the same. Secondly, the influence of a change in standard of living, or efficiency, or wages, is cumulative. If, say, efficiency increases, wages will increase. They will push up the standard of living. It, in its turn, will increase efficiency further. The circle thus got going will continue to run incessantly.<sup>9</sup>

#### § 4. REAL AND NOMINAL WAGES

##### Meaning

In modern times, labourers are generally paid in money. Wages paid in terms of money are known as *Money* or *Nominal Wages*.<sup>10</sup>

The labourer does not value money for its own sake. What is of *real* importance to him are the necessities, comforts and luxuries which he can purchase with the money wages he receives. Again, he also attaches substantial importance to other kinds of payments, concessions and incidental advantages which he gets in addition to money wages. For instance, a domestic servant may get free lodging, old clothes and shoes, *inam* on festivals and free trips with his master. A mill worker may similarly obtain mill products at concession rates, free reading room, free games, etc. *The necessities, comforts and*

<sup>9</sup> See A. C. Pigou, *Economics of Welfare*. It has been assumed in this discussion that the expenditure of the labourers will be wise. If wages increase, the standard of living and with it the efficiency, it has been assumed, will go up. It is true that at times labourers indulge in foolish expenditure as well. The best way to check it is (1) to increase wages to some veiled form, as for example, giving them A quality wheat at the price of B quality, or (2) to make this increment very gradual. This increase should be accompanied with a propaganda in favour of wise expenditure.

<sup>10</sup> Some writers define money wages as wages expressed in terms of money. This language is faulty leading to fallacious notion. If the entire real wages are evaluated or expressed in money, they will not probably be called money wages. The point is debatable, any way.

*luxuries which can be purchased with the money wages or other kinds of payment, together with concessions and advantages incidental to the service, constitute the real wages.*<sup>11</sup>

Nominal wages are expressed in money while real wages are reckoned in commodities and services. Labourers are not so much concerned with money wages as with real wages. Wages in a village may be only Rs. 5 per month and those in a town Rs. 7 per month ; but the prices in the town may be much higher than those in villages so that the real wages in the village may be higher than those in the town. When a labourer has to choose between two services, he takes into account not the money wages but the real wages. It is, therefore, important to know what considerations enable us to assess real wages.

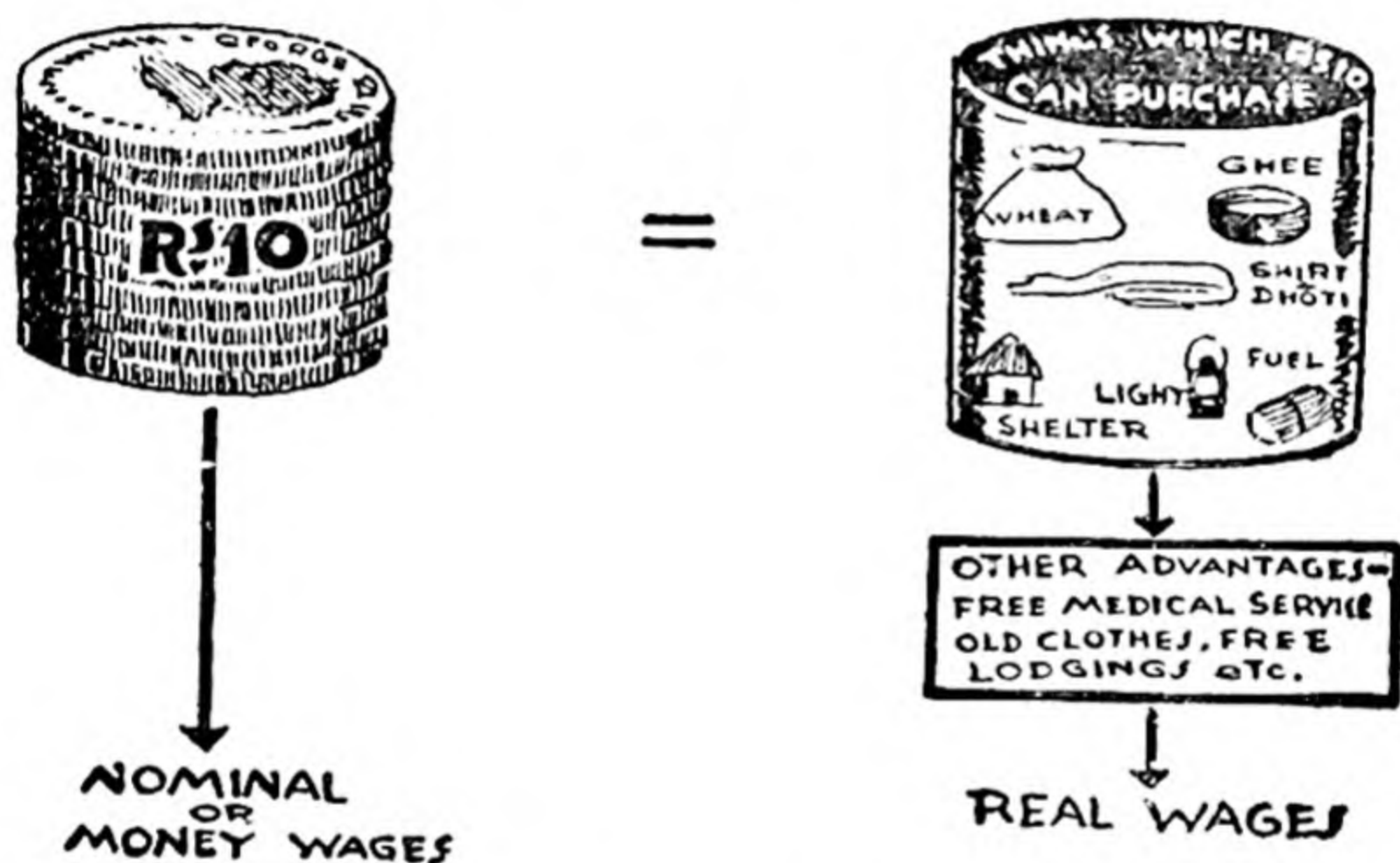


Fig. 47. Illustrating nominal and real wages.

### Factors Affecting Real Wages

(1) *The Purchasing Power of Money.* The most important factor determining real wages is the purchasing power of money. At some places general prices are very low so that the purchasing power of money is fairly high; at others, on the contrary, prices are very high so that the purchasing power of money is very low. If the wages are, more or less, the same at all such places, labourers will prefer the former class of localities to the latter. For instance, in a village, agricultural commodities (which are the things mostly entering into the consumption of labourers) are cheap; in a neighbouring town, like Allahabad, they are higher; while in a thickly populated industrial town, like Bombay and Calcutta, they are higher still. This is an important

<sup>11</sup> Money wages refer to the contents of the pay envelope, to the number of dollars the wage-earner receives. By real wages is meant not the number of dollars, but the amount of purchasing power received.—J. R. Turner, *Introduction to Economics*, p. 458.



reason why wages are generally low in villages, high in neighbouring towns and highest in the industrial centres.<sup>12</sup>

(2) *Incidental Advantages.* Besides money wages, workers may enjoy various concessions and privileges. Agricultural labourers get cheap or free milk, *mattha*, and a cottage. The manager of a bank gets a free bungalow. Teachers and government servants receive provident fund or pensions. Railway servants get travelling tickets. All such incidental advantages determine real wages.

(3) *Period and Cost of Training.* Real wages also depend upon the period and cost of the training received by the labourer. There are some unskilled occupations which require no training whatsoever; for example, the digging of earth or the lifting of bricks. Anybody can become an unskilled labourer without any training. There are other occupations which require some training involving a little expense and time, *e.g.*, the work of motor driving. There are still other occupations requiring fairly lengthy periods of expensive training, *e.g.* medical profession. These considerations must be taken into account in finding out real wages. If a motor driver gets Rs. 30 per month and a graduate teacher Rs. 35 per month, the real wages of the latter are definitely lower than those of the former.

(4) *Trade Expenses.* In the course of carrying on one's occupation, one has sometimes to incur certain expenses. For instance, a college professor has to engage a conveyance for going to the college and to spend money on books and magazines. A lawyer, similarly, has to have a conveyance, keep a clerk and pay to the lawyers' association. All such trade expenses must be deducted from money wages in order to find out the real wages accurately.

(5) *The Nature of Employment.* Besides trade expenses, the nature of the work is also important. Some occupations are very exhausting (*e.g.*, black-smithy) and reduce the working life of the labourers. Others are dangerous (*e.g.* lead-working) and shorten the earning period. Then there are some occupations which are definitely dirty and abhorring, *e.g.*, the work of a sweeper or of a butcher. All such factors must be taken into account while determining real wages. As compared to such occupations, there are other lines of work which are definitely pleasant and afford much happiness, *e.g.*, the work of a teacher or of an artist. This pleasantness increases real wages just as exhaustiveness, danger and dirtiness decrease it.

(6) *The Length of the Working Day.* Besides the nature of the occupation, the number of hours worked per day and the number of holidays also affect real wages. The difference becomes important when we compare the case of a bank manager who has to go to his bank at 9 A. M. and come back at 6 or 7 P. M., with few holidays, with a college professor who has to take only few periods per day and gets many holidays.

<sup>12</sup> If nominal wages are the same at different periods, real wages are highest at that period when prices are lowest.—Crew, *Economics for Commercial Students*, p. 93.



(7) *The Regularity of Employment.* The regularity of the employment is also an important consideration. Some occupations are merely temporary; for instance, a carpenter may be employed at a particular place for a week or so but thereafter he may be dismissed and may remain unemployed for a fairly long period. Similarly sugar factories work only during winter and almost the entire staff is suspended during the off-season. The irregularity of employment reduces real wages.

(8) *Extra Earnings.* The real wages of an occupation also depend upon the possibility of supplementing the income through other sources. For instance, a bank clerk may work as an insurance agent in extra time. A lecturer may become an examiner, write books or take private tuitions. Such opportunities enhance real wages.

(9) *Employment to Dependants.* The real wages increase still further if opportunities of employment of the various members of the family of the employed are great. In some of the industrial centres the grown-up boys and wives of labourers can easily find work, while in some other places the advantage is not available.

(10) *Prospect of Success.* Real wages are also affected by the possibility of getting a lift or receiving higher wages in future. One may refuse a job promising high wages in the beginning but no rise later on, in preference to another job offering low wages in the initial stages but with fair chances of promotion later on.

*The high purchasing power of money, large incidental advantages, small period and cost of training, little trade expenses, light and pleasant character of occupation, short working days, regularity of employment, extra earnings, employment to dependants and prospects of success, increase real wages; while their absence decreases it.*

## § 5. NOMINAL AND REAL COST OF LABOUR

Just as labourers discriminate between one occupation and another by comparing nominal and real wages, similarly employers discriminate between one labourer and another by comparing nominal and real cost of the worker. The wages paid to a labourer constitute his nominal or money cost to the employer, while his productivity gives his real cost. If two spinners are employed at 8 annas per day and one spins 800 yards of yarn while another spins only 400 yards, the nominal cost of both is the same but the real cost of the first labourer is just half of that of the former.

### **High Wages are Cheap Wages**

The prevailing notion amongst many Indian employers is that it is economical to employ a low paid man. But the policy of depressing the labourer's standard of living through low wages, is not in the best interests of the employers. American labour is in many industries the cheapest labour in the world because it is the best paid. High wages make possible a high standard of living. The high standard makes the labour intelligent, hopeful and full of character as well as



more efficient physically. The increase in efficiency is, up to a point, more than proportionate to an increase in wages. Let us take an illustration. If the employer gives twelve annas a day to the labourer who spins 40 yards a day and eighteen annas to him who spins 800 yards daily, then seeing the wages alone, the former is the cheaper man; but in fact, the latter is more economical. The cost of spinning per hundred

yards of yarn in the case of the first labourer is— $\frac{12 \times 100}{400} = 3$  as.

while in the latter case it is only  $\frac{18 \times 100}{800} = 2$  annas 3 pies. Thus

money cost (or wages) may be high but real labour cost may be low.

### Low Wages are Dear Wages

In the above example the cost of labour is higher in the case of the worker who receives low wages. Low wages are, therefore, dear wages. Employers have now begun to realise that low wages are not economical or profitable to them. If the wages are very low, the standard of living of the worker is unduly depressed and his productivity decreases more than proportionately. Intelligent employers now aim at paying "efficiency wages" which might be sufficient to keep the labourers efficient and their productivity high.<sup>13</sup>

### Long Hours are Unprofitable

Some employers have the wrong notion that if they can make labourers work for long periods, they will be able to extract from them more work and their cost of production will go down. In fact, unduly long periods of work use up the vitality of the labourer so rapidly that his efficiency decreases more than proportionately with the result that he becomes costly. It has been found by experiment that if the number of hours are reduced *up to a certain point* labourers produce more during the short time that they work than what they formerly did in the long period. Of course, if the working hours are reduced beyond that point, productivity will certainly go down.

## § 6. METHODS OF WAGE PAYMENT

The method of the payment of wages is as important as the amount paid. If the method of wage payment is defective, even high nominal wages may not be very real advantage to labourers. There are two important methods of paying wages. The most frequent and important is the payment of *time wages*, i.e., wages paid according to a unit of time—daily, weekly, monthly or annually. This method is not found most suitable in all cases and wages are sometimes paid according to the unit or piece of work completed by him. The wages paid according to the latter method are known as *piece wages*. We shall discuss below the advantages and disadvantages of each of them.

<sup>13</sup> Cheap labourer is very likely to be inefficient while a good man, as the saying goes, is always worth his wages. The real value of labour to the employer depends entirely on its efficiency. If by giving his men shorter hours, better wages or better conditions of labour in any way, an employer finds that



## Advantages and Disadvantages of Time Wages

The great merits of time wages can be appreciated by the fact that this system is most extensively used. The system of time wages ensures *regularity of employment*. If the labourer falls ill for a few days, or if the factory stops working due to the breakdown of machinery or shortage of raw materials, no deduction is made from the salary of a labourer paid on, say, monthly basis. Again, it *preserves the physique of workers* by giving them no urge for overstraining themselves and thus ruining their health. Where *delicacy and perfection of workmanship* are paramount considerations, this is the best method of wage payment since it gives no stimulus to hurried or "scamped" work. Moreover, where the amount of *work cannot be measured*, e.g., the work of a supervisor or manager, this system is best of all.

The system of time wages has many shortcomings as well. Its one great defect is that it does not give any incentive to labourers for working more efficiently. On the other hand, they are sure of a definite remuneration and as such become slack. For this reason, proper supervision has to be kept over them, which increases the overhead charges. Again, this system makes the discrimination between an efficient and an inefficient worker difficult. Efficient workers are paid less in proportion to their efficiency, as compared to inefficient workers.

## Advantages and Disadvantages of Piece Wages

This system is fair and just. The wage-earner receives remuneration for the actual work he does. The employer also gets full return for the wages he gives. Secondly, the greater is the quantity of work done by a labourer, the more are his earnings. Under this system, then, there is an urge to increase production; each good worker gets more than what he could get as time wage; and efficiency is automatically rewarded and inefficiency punished. The cost of supervision is also reduced to the minimum.

This system, however, suffers from serious demerits. Since wages are proportionate to the actual work done, labourers usually work very hurriedly and overstrain themselves. Their work is, as a consequence, poor in quality; besides, their health is seriously injured and they become old at a premature age. Moreover, if the labourer falls ill, he does not get remuneration for the period of his absence from the factory, which is a matter of special hardship to him, living as he does from hand to mouth. Further, it creates jealousy and competition among workers.

## Scope of These Methods

Too much emphasis should not be laid on the differences between their efficiency is increased then he may find it to his interest to do so. The increased product due to the greater efficiency of their labour may more than recompense the employer for the extra wages paid. This argument is the real justification for the efforts of trade unions to improve the position of the working man.—Todd, *Political Economy for Egyptian Students*, p. 61.



ween these two methods of wage payment. At bottom, both the methods have intimate relationship with each other. Piece wages are always fixed on the basis of the time required for the performance of the particular work in question. Similarly, time wages are fixed after a careful consideration of the work which can be done during a certain time. "Presumably the employer endeavours to get the same amount of labour for his money whichever method he adopts."<sup>14</sup> The primary considerations leading to the preference of one system over another are (1) the quality of the workmanship and (2) the measurability of the work performed. If high workmanship is necessary or the measurement of the work done is difficult, time wages are given; in the opposite case, piece wages are paid. Generally speaking, time wages are most widely adopted.<sup>15</sup>

## § 7. TRADE UNIONS

### Meaning of Trade Unions

We have seen that the bargaining capacity of an individual labourer is very weak. They can successfully compete with employers only if they combine together and bargain collectively. With this object in view, labourers organize themselves into labour or trade unions. Sydney and Beatrice Webb, authorities on trade unionism, define a trade union as "a continuous association of wage earners for the purpose of maintaining or improving the conditions of their employment."<sup>16</sup>

The functions of a trade union are the following : (1) To emphasize the common interest of labourers and, by spreading the feeling of brotherhood, to foster unity and solidarity among them. (2) To maintain and conserve the advantages and privileges secured for the labourers. (3) To make efforts for improving their position still further, to fight the cause of the workers and to secure all vantage positions for them. Due to this fact, it is called a *militant organization*. The chief advantages for which it fights are an increase in wages and a reduction in the hours of work. (4) To work as a benefit organization and to provide relief to the members at the time of sickness or accident and to support them when they are unemployed. This function gives it the designation of a *ministrant association*. (5) To increase the efficiency of labourers through public health campaigns, literacy propaganda and otherwise.

### INTERMEDIATE QUESTIONS

1. Why do wages differ (i) from occupation to occupation, and (ii) from country to country? (Andhra, I. A., 1944).

2. (a) Why do wages differ from occupation to occupation? (b) How far is it true to say that "wages are not high because standard of living is high,

<sup>14</sup> Clay, *Economics for the General Reader*, p. 297.

<sup>15</sup> A very interesting account of these methods is to be found in the U.S. A. *Final Report of the Industrial Commission* (1902), pp. 736-736.

<sup>16</sup> The *Trade Union* is an organization designed to put up the seller of labour on an equality with the buyer as regards bargaining strength.—Clay, *Op. Cit.*, p. 306.



but standard of living is high because wages are high" ? (Bombay, I. A., 1940).

3. Write a critical and explanatory note on Trade Unions. (Bombay, I. A., 1940).

4. Account for differences in wages (a) within the same occupation, and (b) as between different occupations. (Bombay, I. Com., 1949).

5. "Between the upper limit set by marginal productivity and the lower limit set by subsistence, wages are indeterminate. Discuss. (Bombay, I. Com., 1948).

6. What are the main causes of low wages paid to sweepers, landless labourers, and primary school teachers in India ? (M. B., I. A., 1951).

7. Distinguish between real and nominal wages, and point out the factors on which real wages depend. (M. B., I. Com., 1953).

8. What are Trade Unions? How do they attempt to achieve their object ? (Mysore, I. A., 1943).

9. Distinguish between Real Wages and Nominal Wages. Give the causes of the differences of wages in different places and occupations. (Osmania, I. A., 1952).

10. Show how wages are determined. How do we calculate real wages ? (Osmania, I. A., 1951).

11. What are the factors which determine the high or low level of wages of any class of workers ? (Patna, I. A., 1950).

12. Distinguish real from nominal wages. Discuss the factors which determine real wages. (Patna, I. A., 1949).

13. Explain the difference between real wage and nominal wage. Explain the factors which determine real wages. (Patna, I. Com., 1952).

14. Distinguish between Time Wage and Price Wage, and indicate their advantages. (Patna, I. Com., 1952).

15. How are wages determined ? Distinguish between nominal and real wages. (Poona, I. A., 1950).

16. In what ways are Trade Unions useful to labourers ? (Poona, I. A., 1950).

17. Account for the differences of wages in different occupations. (Poona, I. A., 1949).

18. Distinguish between money wages and real wages. What do you understand by the economy of high wages ? (Poona, I. Com., 1950).

10. How are wages determined ? Explain the differences in wages among different occupations. (Poona, I. Com., 1949).

20. Explain the law that determines wages under free competition. (Punjab, Int., 1951).

21. How are wages influenced by (a) foreign competition, and (b) trade unions ? (Punjab, Inter., 1950).

22. What are the peculiarities of labour as a factor of production ? Examine their influence on determination of wages. (Raj., I. A., 1953).

23. Distinguish between Real and Nominal Wages. Why wages differ in different industries ? (Raj., I. A., 1951).

24. What is meant by economy of high wages ? Explain the statement that dear labour is really cheap labour. (Raj., I. A., 1951).

25. Explain "High money wages do not necessarily mean that wages are really high." (Raj., I. Com., 1952).

26. How are wages determined ? Account for the differences in wages in different industries. (Raj., I. Com., 1950).

27. "The labour is rich or poor, is well or ill rewarded in proportion to the real, and not nominal, wage of labour." Elucidate. (Utkal, I. A., 1952).

28. Distinguish between Real and Nominal Wages. How are wages determined ? (Utkal, I. A., 1951).



## CHAPTER 51

### INTEREST

In every act of production in modern industry, manual work, organizing work, capital in the form of machine and power, plant and land, co-operate and because they co-operate, share in the product. Interest is paid for the use of capital because the capital is productive ; it enables its user to produce more than he could without it and out of this additional product interest is paid.—*Henry Clay*.

#### § 1. INTRODUCTORY

##### Meaning of Interest

The word *Interest* is one of common usage and the reader is probably familiar with it. The economic meaning of this term does not differ from its everyday sense. The payment made by the borrower to the lender for the use of the latter's capital is commonly called *interest*. It may otherwise be described as the share of the national dividend accruing to the suppliers of capital. Capital is mostly lent in form of money and interest is also paid in that shape. It is expressed as certain percentage and is calculated mostly yearly.

Interest can be looked upon from two standpoints. *From the point of view of the borrower*, capital contributes to the production of wealth; in other words, it has productivity. It is because capital produces some value that the borrower finds it possible to pay interest for its use. *From the point of view of the lender*, the accumulation of capital and its disposal as a loan involve the abstinence from immediate consumption; and interest is a reward for that abstinence. Interest may, therefore, be better defined as the payment made by the borrower of capital, by virtue of its productivity to its owner, as a reward of his abstinence.<sup>1</sup>

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<sup>1</sup> Interest is the income which capital returns to its owner whether he lends it or employs it himself in his own business. There are three forms in which this income may be returned. In the first place, it may come as payment for the loan of general fund of wealth. Such a loan usually takes the form of money or some substitute for money such as a credit instrument. In the second place, the capitalist's income may be received for the loan of certain specific pieces of capital such as building and machinery; and in the third place, it may be secured from the use of capital in his own business.

In popular language, only the first form of the capitalist's income is invariably called interest. The second is called either rent or interest and the third either profit or interest. But since they are all alike in being derived from the ownership of capital, economists have generally chosen to call them all by one name, and have chosen *interest* as that name, reserving the word "rent" for the income derived from the ownership of land, and "profit" for an income which has been variously described but which usually has some connection with the peculiar function of the independent businessman himself rather than with that of his land or capital.—Carver, *Distribution of Wealth*, pp. 213-214.

## The Problem of Interest

The problem of interest is divisible into three broad questions:

- (1) Should interest be paid on the moral and ethical grounds?
- (2) Why is interest paid and charged? This differs from the first question inasmuch as this is a purely economic issue while the preceding one is mainly a moral and ethical one.
- (3) How is the rate of interest determined?

Of all these questions, the last one is the most important and will be discussed in § 2. The first two questions are dealt with below.

### 1. Should Interest be Paid?

The question of the ethical justification or impropriety of charging interest is mainly a moral one; and economists are not directly interested in it. But, like all the ethical problems, it has an economic aspect and is, therefore, discussed below.

*The Condemnation of Interest in Ancient Times.* In ancient and mediaeval times, interest was generally condemned. The church forbade the lending of money on interest. Plato looked down upon usury; and Aristotle criticised it in unmistakable terms giving the progeny the celebrated phrase "Money is barren, it cannot breed money". The Islamic religion also prohibited it strictly. The reason for this universal deprecation of interest was that in those days the society had not much developed industrially and commercially. Money was generally borrowed either in times of want and distress or for prodigality. As such, (i) lenders could easily oppress the borrowers by charging exorbitant rates which often ruined the borrowers; and (ii) since capital was not put to productive purposes, the fallacy that capital could not "breed money" and the charging of interest was, therefore, unjust, could arise even in a mighty mind like that of Aristotle. Due to these reasons interest was condemned. This prohibition was also partly due to the fact that most of the money-lenders in Europe were Jews, who were non-Christians and were an eye-sore to Christians.

It is significant to note that the code of Manu in India did not forbid interest. It shows that Manu and other ancient thinkers of India were intellectually enlightened and considered the problem in all its aspects. It was also due to the fact that India was industrially and commercially an advanced nation in those times and the productivity of capital was well appreciated.<sup>2</sup>

*The Modern Justification.* Slowly the world emerged from the industrial and commercial backwardness. Inventions in various spheres gave an entirely new outlook to the people. Manufacturing machines multiplied. The network of the means of transport and communication began to spread rapidly. Trade, national and international, increased by leaps and bounds. The productive nature of

<sup>2</sup> For a lucid account of the early history of interest, see Irving Fisher, *The Rate of Interest*, pp. 4-7. Also Dr. H. S. Gour, *The History and Law of Interest*.



capital asserted itself with unmistakable prominence. It began to be realised that since capital brings financial benefits to the borrower, it is only fair that he should give a part of that benefit to its owner. It was also felt that saving involves the postponement of present consumption on the part of the capitalists, a sort of pain which will not be deliberately borne unless rewarded. These considerations made the old prohibition against taking interest obscure and today it has become a thing of the past. This change vividly brings before our mind how Economics influences Ethics.

*Interest and Usury.* Though interest is generally justified (except by socialists), usury is usually looked down upon. Usury differs from interest in the sense that it exceeds the latter and is, therefore, unjust. It may be described as exorbitant or excessive interest.<sup>3</sup> It may be well likened to rack-renting. Under special circumstances, a landlord can charge rent higher than economic rent; such an action is called rack-renting. Under similar circumstances, a capitalist can charge more than the proper rate of interest; such excessive interest is called usury. Usury is deprecated ethically, condemned socially, and often prohibited legally.<sup>4</sup>

### Why is Interest Paid and Charged ?

We shall now discuss the economic conditions which make the borrower pay and the lender charge interest.

The borrower pays interest because he knows that *capital is productive*, and out of its productivity he can pay a sum in the shape of interest to the capitalist. For instance, an ordinary cap-maker in a village, working without a sewing machine, may be earning Rs. 10 a month. He knows that if he has a sewing machine, he can make more caps and earn, say, Rs. 20 per month. The productivity of the machine, then, is Rs. 10 per month. Now, if he is offered sufficient money to purchase a sewing machine on the payment of Rs. 5 per month as interest, he will readily agree to the transaction. He will have to pay only a part of the productivity of machine as interest, the remainder being left with him.

The second consideration which forces him to pay interest is the fact that the *capitalist saves capital painfully*. He postpones the satisfaction of many present wants and by stinting the present pleasure, saves capital. Not only this; he himself does not use capital productively, but foregoes that privilege in favour of the borrower. For this abstinence or sacrifice, he must be rewarded. Unless this reward is

3 The term 'usury,' as contra-distinguished from interest proper signifies interest at a rate higher than that limited by law as legally eligible.—Dr. H. S. Gour, *The History and Law of Interest*, p. 135.

4 The exact rate of interest.....is determined by supply and demand .....but clearly the lender must not extort a rate of interest greater than that which is fair and reasonable to demand. In certain cases the law of the land steps into control the rates at which money may be lent.—Crump, *A First Book of Economics*, p. 99.



forthcoming, he will not supply capital. That is why the borrower consents to pay interest. The productivity of capital enables the borrower, and the abstinence or sacrifice involved in its supply compels him, to pay interest.<sup>5</sup>

These considerations also work in the mind of the capitalist and make him charge interest. Firstly, he knows that capital is productive ; hence if he does not derive the benefit of its productivity himself and gives this privilege to somebody else, he must get a fraction of that benefit. Secondly, he wants some reward for the abstinence or sacrifice he has to make in supplying capital.

*The reasons then why interest is paid and charged are the productivity of capital and the abstinence or sacrifice involved in its supply.*

## § 2. THEORY OF INTEREST

### Old Theories of Interest

We shall now discuss how the rate of interest is determined. This question has occupied the attention of economists from very early times and various theories of interest have been propounded. The most important of these theories are (i) The Productivity Theory, (ii) The Abstinence Theory, and (iii) The Austrian Theory. Each of these theories contains some truth but does not discuss the problem in its entirety and with perfect accuracy. Often they throw light only on one aspect of the problem. They have, therefore, been substituted by the Modern or Demand and Supply Theory of Interest, which is considered to be the best available explanation of the way in which interest is determined.

*Modern Theory.* According to it, interest is determined by the demand for and the supply of capital. It is the point of equilibrium at which the demand for capital is equal to its supply.

### 1. Demand for Capital

Demand for capital comes from those who want to use it productively, e.g., traders, manufacturers, and agriculturists. Sometimes Government also borrow money for the construction of productive work like hydro-electric projects, means of transport and communication, etc.

The contribution made by a dose of capital to total output is called its *productivity*. It has been found by experience that the

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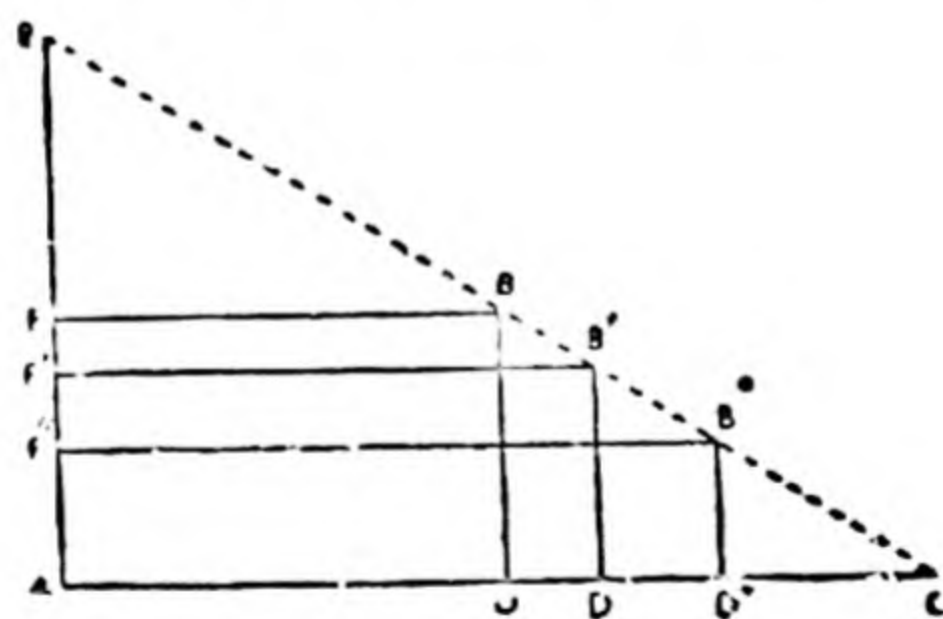
<sup>5</sup> If we appeal to the common consciousness to say what is that capital does, or forbears to do, that it should receive interest, we shall probably get two answers. One will be that the owner of capital contributes a valuable element to production ; the other, that he abstains from using his wealth in his own immediate consumption. On one or other of these grounds, the capitalist is said to deserve a remuneration and this remuneration is obtained by him in the shape of interest. The first contribution is positive—that capital does something ; the other negative—that the capitalist abstain from doing something. In the one case interest is a payment for a tool ; in the other a recompense for a sacrifice. The first answer is the basis of the Productivity theories and of the Use theories ; the second is the basis of the Abstinence theory.—See Smart's Preface to the Translation of Bohm-Bawerk, *Capital and Interest*, pp. VII-XVII.



productivity of every successive or additional dose of capital (*i.e.*, marginal productivity of capital) goes on declining as more and more capital is employed, provided the quantity of other factors is not changed. The productivity of capital thus resembles the utility of a commodity which also diminishes with an increase in its supply.<sup>6</sup> Now, when an entrepreneur considers whether or not he should employ an additional dose of capital, he compares the productivity of the additional dose of capital with the interest that will have to be paid on it. He will go on employing more and more dose of capital so long as the productivity of each additional dose of capital exceeds the interest paid on it. In course of time, a point is reached at which the productivity of the last unit of capital is equal to the interest he is required to pay for it. The employer will stop at this point and will not demand capital any more. The last unit of capital is called *final unit* because it is the last unit which a capitalist can, or will, employ. It is also called *marginal unit* because it is on the margin of employment or rejection. Its productivity being equal to interest paid on it, it is a matter of indifference to the entrepreneur whether this dose is employed or not; the employer may use this unit or may not use it. The productivity of this marginal or final unit of capital is known as *final or marginal productivity of capital*.<sup>6</sup>

<sup>6</sup> *Measurement of Marginal Productivity of Capital.* Marginal productivity of capital can be measured in terms of money by finding out the increase in the income of a firm if one more dose of a capital is employed. Suppose a mill is using Rs. 1,00,000 as capital and its annual income is Rs. 12,000. Now if it employs Rs. 1,000 more (*i.e.*, 1,01,000 in all), its income might go up to Rs. 12,120. Then Rs. 120 is the marginal productivity of capital (assuming that capital is employed in doses or units of Rs. 1,000).

The working of the law of marginal productivity as applied to capital might be illustrated by means of the following diagram :



Let the amount of capital be measured along the horizontal line AC, and let the productivity of capital be measured along the perpendicular line AE, and let the descending line EC represent the rate of decrease in the marginal productivity of capital. If the amount of capital were measured by AD, the marginal productivity would be measured by the line BD or AF. If the amount of capital were measured by AD', marginal productivity would, other things remaining equal, be measured by the line B'D' or AF'; and when the amount of capital equals AD'', marginal productivity would be equal to B''D'' or AF''. If capital went on increasing to AC' the marginal productivity of capital will be destroyed altogether.—Carver, *Op. Cit.*, p. 223.

The maximum that the borrower will pay for the marginal unit of capital is its productivity ; he will not pay more than that. And since each unit of capital is interchangeable with any of the other units, he will pay the same for every other as well. It follows, therefore, that the marginal productivity determines the maximum that the producer is willing to pay for the use of capital.<sup>7</sup>

### Supply of Capital

The supply of capital involves abstinence or sacrifice and unless an adequate reward for it is forthcoming, capitalists will not supply capital. The money measure of the abstinence or sacrifice involved in supplying capital, is, then, the minimum below which interest cannot fall. It may be called the cost of production of capital ; and just as the cost of production of a commodity determines the maximum limit of its price, similarly the cost of production of capital determines the lowest limits to which the rate of interest can fall.

### Determination of the Rate of Interest

Between these two limits, the maximum as determined by the marginal productivity of capital and the minimum as fixed by the abstinence or sacrifice involved in the supply of capital, the rate of interest is determined according to the relative forces of demand and supply, by mutual bargaining and higgling of borrowers and lenders. In new countries where men happen to be progressing economically, the demand for capital is great ; so the rate of interest is high. As communities grow and advance, capital increases and is in time more than enough to meet even increased demand ; so the rate of interest falls.

### Illustration

Suppose the demand for and supply of labour in a country is as shown in this table. It is clear from this that as the rate of interest rises, demand for capital declines and its supply rises, when the rate of interest is 3% the demand for capital is Rs. 600 crores and its supply is also the same. Therefore 3% is the point of equilibrium, and this will be the rate that would prevail in the market.

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<sup>7</sup> Money demanded for non-productive purposes cannot, according to our definition of capital, be included under this term. But non-productive demand is similar to the demand for productive purposes and, therefore, exercises and influence on the determination of interest on capital. It is, I believe, for this reason that some economists add the non-productive demand to the productive demand in order to arrive at the total demand. It should be remembered, however, that in the case of capital used productively, it is *marginal productivity* which determines the maximum limit of the rate of interest. But in the case of wealth borrowed for non-productive purposes, it is the *marginal utility* which determines this maximum. This difference does not appear to me very important in this context ; and the above method of treatment may be followed.

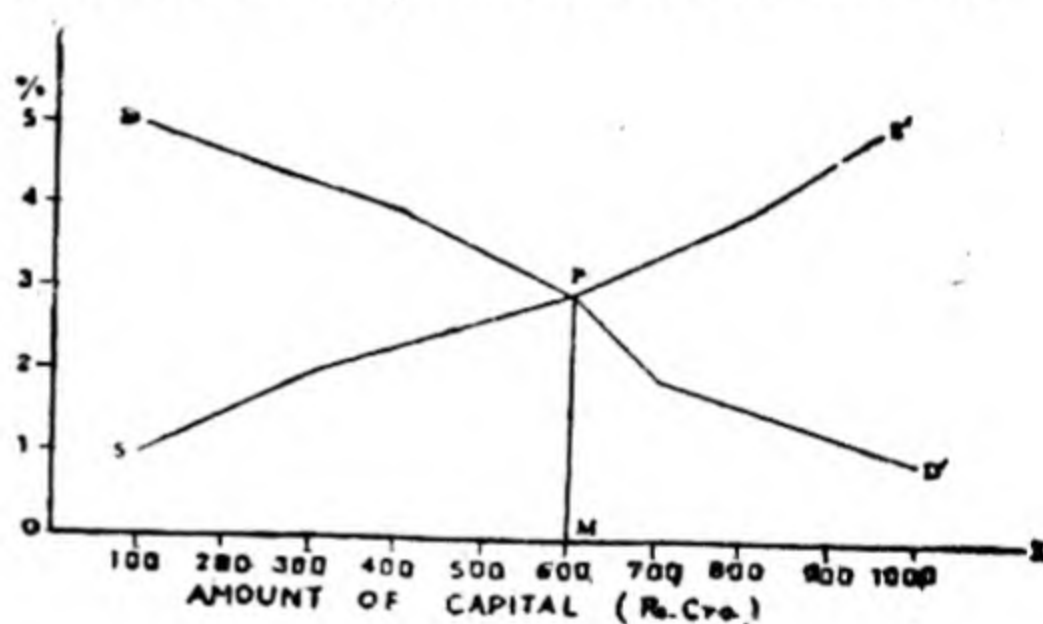


Rate of Interest %	Demand for Capital (Rs. cr.)	Supply of Capital (Rs. cr.)
1	1,000	100
2	700	300
3	600	600
4	400	800
5	100	950

### Diagrammatic Representation

In the adjoining diagram, amount of capital has been measured along OX-axis and rate of interest along OY-axis. DD' curve has been drawn to represent demand for capital and SS' curve to represent supply of capital. They intersect each other at P. Therefore, PM will be the rate of interest and OM, the amount of capital lent and borrowed at that rate.

amount of capital has been measured



### § 3. NET AND GROSS INTEREST

#### Meaning

The payment made exclusively for the use of capital, is called *net interest*. It may be also defined as the income derived from capital invested in channels free from risk, inconvenience and management duties. What the borrower actually pays to the capitalist for the use of his capital it is known as *gross interest*.<sup>8</sup> The payment so made includes, besides net interest, any or all of the following factors :

(1) *Insurance Against Risk*. When a man entrusts his capital to somebody else for some time, he incurs the risk of its loss as a result of the inability or unwillingness of the borrower to pay back his debt. To cover this risk he makes some charge which is added to the net interest.

The risk is of two kinds : (a) *Business Risk*. The business followed by the borrower may be safe or risky. For instance, the work of a publisher is not so risky as that of a speculator. As such the charge made for the risk by the lender of capital will be greater in the latter case than in the former. The risk attached to the business

<sup>8</sup> Gross interest is what we mean by interest in ordinary talk, the whole amount that a borrower has to pay, while *net interest* is that portion of the gross interest which is paid simply for the use of capital.—Moreland, *Introduction to Economics*, p. 252.

of the borrower determines his *ability* to pay. (b) *Personal Risk*. A man may be able to pay but may not be willing to do so. He may be of dishonest intentions. The gross rate of interest charged from such man will be naturally high. It will be low in the case of the borrower who is famous for his integrity and who takes pride in paying off his debts as readily as possible.

(2) *Remuneration for Inconveniences*. Some investments of capital involve many inconveniences. In some cases money is payable at any moment, may be at the time when the borrower has no other source of investment; in others it may be payable only after a very long period. Again, some investments can be made only in large amounts, *e.g.*, in the shares of the Imperial Bank, the value of each of which is one hundred rupees ; or, they can be made in only small amounts, like the deposits in saving bank account. The capitalist charges something for such inconveniences. An important cause of the high rate of interest charged by Pathans and Kabulis is the great inconvenience involved in the realization of loans. An ideal investment is one where money may be invested at any time and in any amount and withdrawn whenever desired. Such an investment involves no inconvenience and no remuneration is charged for it.

(3) *Remuneration for Management*. The lender has to spend money and energy in the management of an investment. He has to discover the likely borrowers and carefully consider the safety of the loan made to them. He has to settle the rate of interest with them. The necessary legal formalities have to be undergone. Proper accounts have to be maintained. The borrowers do not pay punctually and reminders have to be sent constantly till the debt is cleared off. For this management, a charge is made in the shape of an addition to the net interest. In the rural areas of India the small loans given by *Mahajans*, *Pathans* and *Kabulis* involve much labour and management. Re-payment is arranged in small instalments and for the collection of each instalment villagers have to be approached several times. This is one reason why the rate of interest is so high there.

### Variations in Gross Interest

Generally speaking, the net rate of interest is more or less the same everywhere : competition among borrowers and lenders tends to reduce it to the same level. But due to variations in risk involved in the loan, inconveniences of investment and the labour of management, gross interest (which is called interest in everyday speech, though not in Economics) differs widely. Investment in Government securities is quite safe, is not inconvenient and does not involve any labour of management. It is, in fact, the nearest approach to the net interest in practical life. The rate of interest payable by strong and well-known banks is also sufficiently low. The interest which a city businessman or manufacturer pays is more than that paid by the Government, in proportion to the risk, inconveniences and managerial duties involved. When we come to rural areas, we find even higher rates of interest. This is partly due to the fact that the loan given to the agriculturists is very risky. In spite of his sincerity, he might not be in a position to



repay the loan. It is the experience of money-lenders that once the loan is given to the cultivators, it is repaid very gradually. Moreover, inconveniences of such a loan are also great, there being no definiteness about the duration, amount, or repayment of the loan. Finally, the labour of management, as seen above, is also tremendous.

*Rates of Interest also Vary from Country to Country.* This is due to the international immobility of capital. Investors in foreign countries have the fear that if the foreign debtor does not pay, the trouble and expenses of taking legal action against him will be huge. Moreover, foreign courts may not be just to him always and in all cases. Finally, if international hostilities break out, foreign capital may be forfeited entirely—even the Government loans may be repudiated in such a case. These causes, together with those discussed above, make for variations in the gross rate of interest from country to country.

#### § 4. THE RELATION OF INTEREST TO PROGRESS

##### Effect of Progress on the Rate of Interest

As society progresses socially and economically, demand for capital goes on increasing. Firstly, the use of machinery extends. Mechanization and re-mechanization progress cumulatively. Scale of production and of trade becomes large. Huge capital is, therefore, demanded. Secondly, the modern state tends to embark upon increasingly ambitious schemes in the interest of its members, which are sometimes financed by loans. Finally, much capital is destroyed by wars, natural calamities, etc., and demand for fresh capital to take its place often arises. Though all these causes increase the demand for capital, its supply increases much more rapidly. Substantial improvements in methods of production and in the efficiency of industrial organization increase the amount of wealth produced per year. Savings become larger as people develop foresight and begin to realise the value of keeping something for the future use. The supply of capital thus outstrips the demand for it with the progress of society; with the result that the rate of interest tends to fall. This has been amply proved by the history of interest during the recent past.<sup>9</sup>

*Zero Rate of Interest.* Some economists believe that the tendency of the rate of interest to fall will persist till a stage is reached when it will become zero. It is difficult to agree with this point of view. This theory substantially means that after some time a stage will come when our wants will be satisfied and we need not employ any capital for the production of wealth. The marginal productivity of capital, in other words, will drop down to zero. But human wants, as we know, are innumerable; and as soon as one want is satisfied,

<sup>9</sup> See my *Insurance Finance*, p. 43. An interesting objective evidence of a fall in the rate of interest is the rate assumed by insurance companies in their calculations. This has been continually declining. Thus Gustav W. Smith assumed 4 per cent. interest in 1875 in his *Notes on Life Insurance*; Riegel and Loman, 3 1-2 per cent. in their *Insurance Principles and Practices*, 1924; while recent works take 3 per cent. interest in their calculations e.g., see Maclean, *Life Insurance*.



another arises. So long as this continues to be a fact, there will remain numerous channels for the profitable employment of capital. Again, zero rate of interest can exist when people are willing to save without any expectation of rewards : in other words, when they become so perfectly rational as to realise the value of providing something for the future use and feel no pain in saving. The assumption of perfect rationality of human beings is a mistake because men are seldom perfect. It is, therefore, wrong to suppose that a stage will arrive when the rate of interest will drop down to zero.<sup>10</sup>

## Rent and Interest

Interest is the share of national dividend accruing to capitalists while rent is the share available to landlords. In short period, both rent and interest are similar. Capital cannot be increased in short period ; neither can the land. This is the reason why income on capital goods, which are limited in supply in the short period, is called *quasi-rent*. It is, however, in the long period that the real difference appears. The supply of capital can be increased in long period; the supply of land, on the other hand, is fixed for ever. As such, while the progress of society, which increases the demand for capital and land alike, depresses interest, but stimulates rent. Moreover, net rate of interest is equal everywhere, but rent differs from place to place according to differences in fertility or accessibility, or both. Finally, rent of a land is the excess of its production over that of the marginal or no-rent land, but interest is not determined in this way; in fact, there is no capital on which no interest is paid.

## INTERMEDIATE QUESTIONS

1. Discuss the difference between net and gross interest and explain how the rate of interest is determined. (Bombay, I. A., 1940).
2. Critically examine the time preference theory of interest. (Bombay, I. Com., 1949).
3. Why is interest paid ? Explain why there are differences in rates of interest (a) at any one time, and (b) in different periods. (Bombay, I. Com., 1940).
4. A businessman borrows money at 6 per cent. a cultivator has to pay interest 12 per cent., and a labourer does not get money even at 20 per cent. What are the causes of the difference in these rates of interest ? (M. B., I. A., 1953).
5. Distinguish between Gross and Net Interest. Why are high rates of interest charged in Indian villages ? (M. B., I. A. 1952).
6. Distinguish between gross and net interest, and explain how the rate of interest is determined. (M. B., I. A., 1952).
7. Distinguish between gross and net interest. Will savings be completely stopped if rate of interest is reduced to zero ? (Poona, I. Com., 1949).
9. Distinguish between gross and net interest. Why does the rate of

<sup>10</sup> Proudhon argued that since the rate of interest declines as civilization advances, its total abolition was only a question of time. This is as good a proposition, says Bastiat, as this : since the most skilful agriculturists are those who have reduced the heads of sheep to the smallest size, we shall arrive at the highest agricultural perfection when sheep shall have no longer any heads !



interest differ from place to place and from time to time? Explain clearly. (Patna, I. Com., 1951).

9. What do you mean by interest? Is it necessary to pay interest? (Patna, I. Com., 1950).

10. Do you agree with the view that interest is a reward for waiting? Give reasons for your answer. (Poona I. Com., 1950).

11. How is rate of interest determined? Distinguish between gross and net interest. (Poona, I. Com., 1949).

12. "Interest is the price paid for the use of capital." In the light of this remark explain how and when changes in the rate of interest may be expected. (Punjab, Inter., 1950).

13. Distinguish between Gross and Net Interest. (Punjab, Inter., 1949).

14. Do you justify the changes of interest on loan advanced by a money-lender to the borrower? (Punjab, Inter., 1948).

15. Discuss the Supply and Demand Theory of Interest. Is there any economic justification for interest? (Raj., I. A., 1953).

16. Discuss why the rates of interest charged by the village money-lender in India are higher than the rates charged by the banks. (Raj., I. A., 1951).

17. Why is interest paid? Account for disparity in rates of interest paid by an agriculturist and a trader. (Raj., I. Com., 1952).

18. Why is interest paid? In the light of your answer, explain the fact that interest on capital is at one period relatively high and at another period relatively low. (Travancore, Inter., 1943).

19. How is it that you do not find one rate of interest in the country? (Utkal, I. Com., 1951).

## CHAPTER 52

### PROFITS

The true rate of profit in large business is higher than at first sight appears, because much that is commonly counted as profit in the small business ought to be classed under another head, before the rate of profits in it is compared with that in a large business.—*Marshall*.

#### § 1. INTRODUCTION

#### Meaning of Profits

Profit is the reward of the risk-taking function, accruing to entrepreneurs or risk-takers. Otherwise expressed, the share of the national dividend accruing to the entrepreneur is known as profit. Economists are not yet agreed as to the constituents of profits and the way in which it is determined. Considerable difference in opinion exists on various points and makes the subject confusing to the beginner. We shall, therefore, set forth the most reasonable and logical opinions on the subject.

#### Profit, a Residuum

Before proceeding further, let us see how profits are found out in practical life. The entrepreneur anticipates the probable future demand and the price of the goods he contemplates to produce. On the basis of this estimate, he enters into separate contracts with landlords, capitalists, labourers and organizers; and production is commenced. The entrepreneur makes payments to the various agents of production according to the rates agreed upon. If something is left from his income after payments are made to the agents concerned, it is his profit. If, on the other hand, his income falls short of the payments he makes, he incurs a loss. Profit is only a residual share of the produce of industry.

It should be remembered that profit is a residual share, not in the sense that rent, interest, wages and salaries are determined by certain special laws applicable to each of them; while any residue left out after these payments have been made is called profit, there being no other law governing its determination. In fact, profit is also determined by its own law. Profit is a residuum in the *practical sense* that what is left over after the payment made to all the agents of production, is known as profit<sup>1</sup>.

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<sup>1</sup> See Carver, *Distribution of Wealth*.



## § 2. GROSS AND NET PROFIT

**Meaning**

In the popular sense, the word profit is used to denote the total return to the entrepreneur after paying rent and interest for the land and capital hired and wages and salaries for the labour and organization employed. In other words, it is equal to the excess of the receipts of a business over the actual expenses incurred by the entrepreneur. This profit is known as *gross profit*.

*Net profit* is not so extensive a term as gross profit. A reward accruing to the entrepreneur only for his risk-taking function and bargaining skill is known as *net profit*.

**Constituents of Gross Profit**

Gross profit is made up of various constituents of which net profit is one. It is, therefore, instructive and interesting to find out its other constituents. The various elements which may be included in gross profit are given below.

(1) *Reward to the Factors of Production Supplied by the Entrepreneur Himself*. In many businesses, entrepreneur himself supplies various factors of production. He is not required to make any payment in respect of them to any outsider; nor does he, generally speaking, himself receive any reward separately. This payment is usually merged in the gross profit. In estimating net profit, therefore, we should deduct from gross profit the rewards to the factors of production, other than the enterprise, supplied by the entrepreneur himself. These rewards may be the following : (i) *Rent on Land*. The entrepreneur might have supplied land, the reward for which must be deducted from the gross profit. (ii) *Interest of Capital*. Generally speaking, the entrepreneur supplies some capital. Unless he risks his own capital in the venture, he may not get much capital from others. (iii) *Wages for Labour*. Sometimes an entrepreneur himself works as a labourer as in the case of Indian cultivators. He then becomes entitled to certain wages. (iv) *Salaries for Organisation*. Whenever an entrepreneur performs certain managerial duties, a reward accrues to him, which should be deducted from the gross profit in order to arrive at the net profit.

(2) *Charges of Maintenance*. (i) *Depreciation Fund*. In the second place, some provision has to be made for the maintenance of capital, or its replacement, as it is gradually used up or becomes obsolete due to better inventions. This provision is known as *depreciation*. Depreciation charges must be deducted from gross profit in order to arrive at net profit, as depreciation charges are the expenses of business. (ii) *Insurance Charges*. Sometimes a careful businessman sets aside a certain sum of money as a provision against possible



loss. Something has to be deducted from the gross profit in the shape of insurance charges before we can arrive at the net profit.

(3) *Extra-Personal Gains*. Even after making all these deductions, our analysis is not complete. We have also to deduct the extra-personal gains, *i.e.*, gains which are not due to the efficiency, or ability, of the entrepreneurs : (a) *Monopoly Gains*. For instance, a businessman possesses certain monopoly advantages. He may have an effective control over the supply of the article he deals in. In this case his profit will increase but his own efficiency is not responsible for this increment. Therefore, the monopoly gain has to be subtracted from the gross profit. (b) *Conjunctural or Chance Gains*. Again, the occurrence of certain unforeseen circumstances may enable a business man to additional reward. For instance, when a great personage dies, there is an unusual demand for mourning goods and traders in the line make great profits. Again, if war breaks out, dealers in arms and ammunitions make huge profits. Such gains are extra-personal resulting as they do from a favourable conjuncture of circumstances which could not have been foreseen. They cannot, strictly speaking, be regarded as pure profit and have to be deducted from gross profit in order to arrive at net profit.

(4) *Pure or Net Profit*. When all the above deductions have been made from the gross profit, the remaining sum is the *net* or *pure profit*. It is the reward for two main functions : (i) *Risk-taking Function*. An entrepreneur takes risk on his estimate of future price and the extent of the demand. He agrees to pay certain remuneration to the various agents of production. If he gets a price higher than what he estimates, he makes large profits. If the price realised falls short of his expectations, he incurs a loss. "That it is the owners of business who take the chief risk is clear when we remember that they have paid for the labour, capital and land before the commodity is finished, often before its price can be found, and if the commodity when made is not wanted and cannot be sold, they cannot recover wages, interest and rent expended in the production of it"<sup>2</sup> (ii) *Bargaining Skill*. While employing various agents of production, the entrepreneur tries to strike as profitable bargains as possible. The degree of his success depends upon his bargaining skill. The reward for risk-taking and the bargaining skill is called net profit.<sup>3</sup>

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<sup>2</sup> Henry Clay, *Economics for the General Reader*, p. 337.

<sup>3</sup>The businessman is essentially an enterpriser, an *entrepreneur*, as he is sometimes technically called. Both terms signify one who undertakes or assumes risks. It is the reward of this special function which, together with the results of superior bargaining, constitutes the peculiar income of the businessman, such an income as is never earned by anyone except a businessman who undertakes risks.—Carver, *Distribution of Wealth*, pp. 296-297.



The constituents of gross profit are shown in the diagram below :

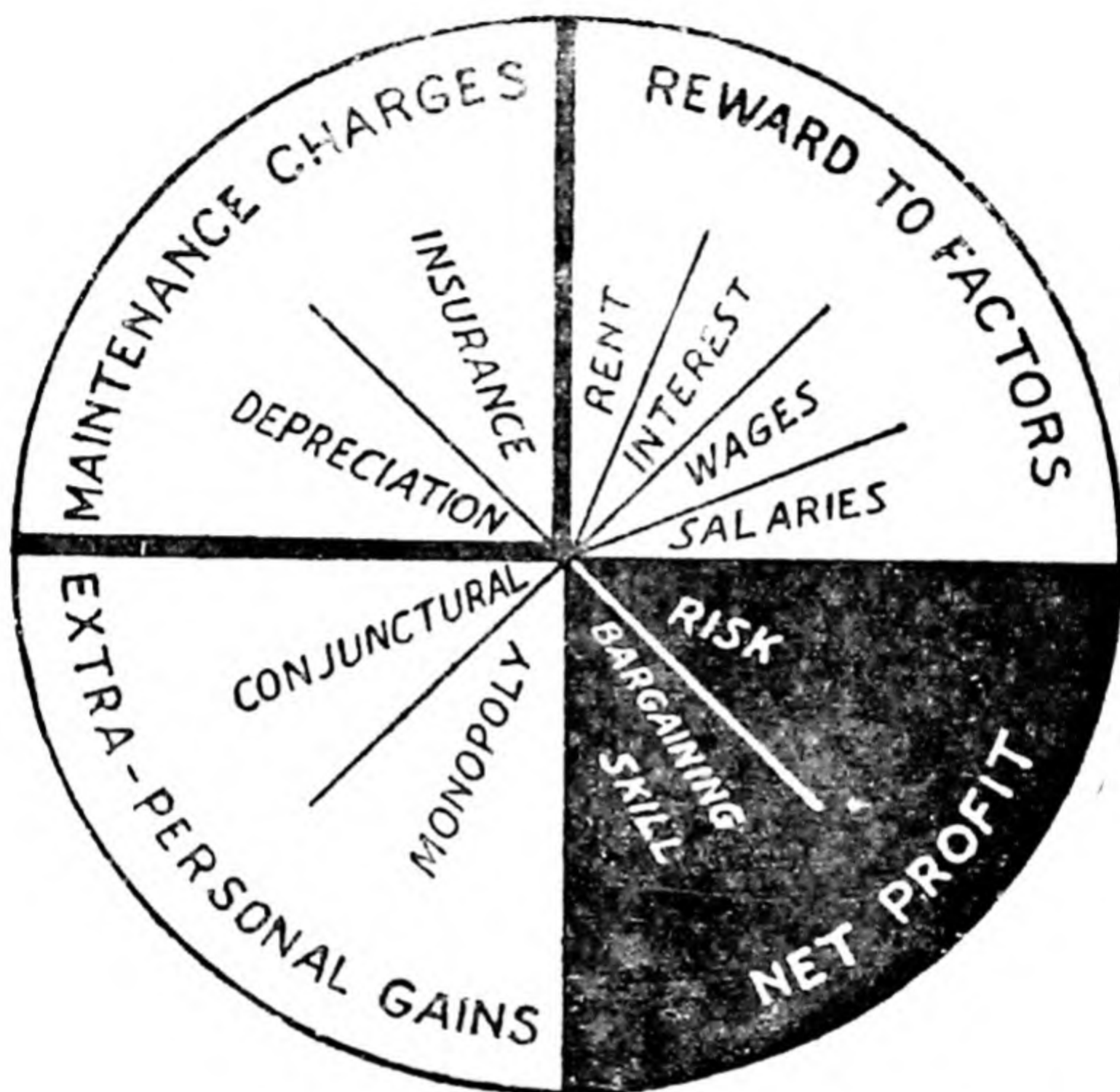
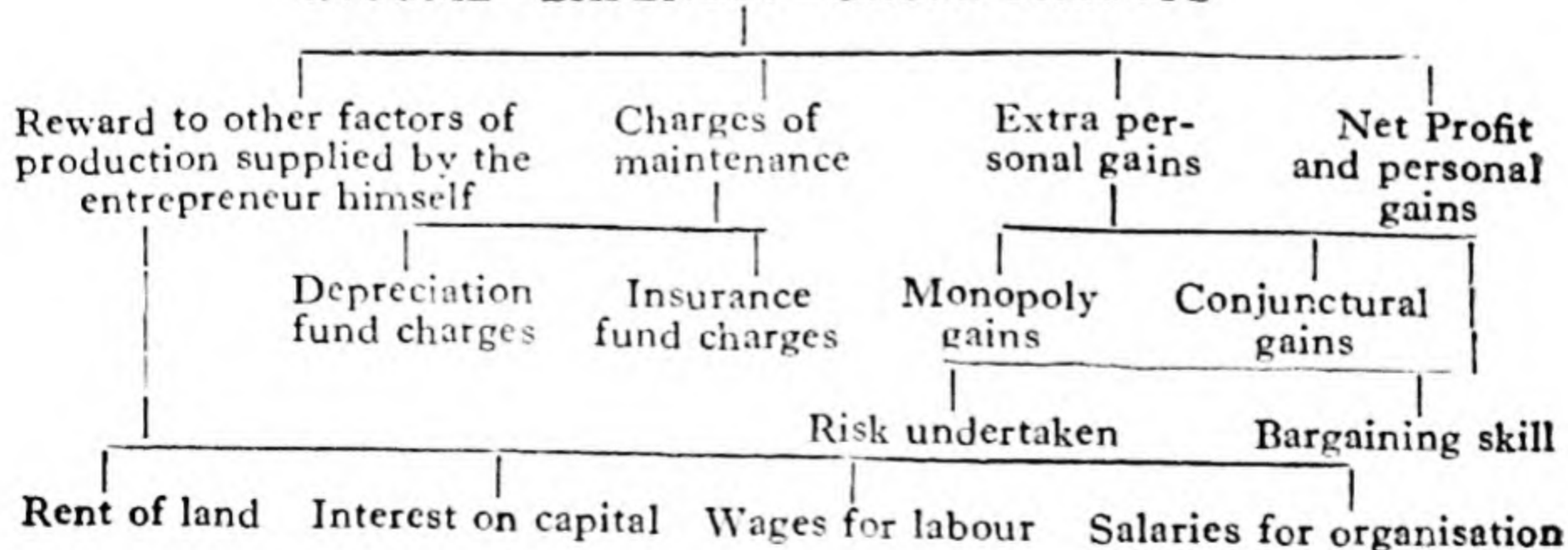


Fig. 48. Diagram showing constituents of Gross Profit.

The above idea can be tabulated as below :

$$\text{INCOME} - \text{EXPENSES} = \text{GROSS PROFITS}$$



### The Concept of Net Profit

According to the above description, net profit is the reward for the risk undertaken and the bargaining skill. This is the viewpoint of American economists. Older economists had the wrong notion

that net profit also includes the reward for the capital contributed by the entrepreneur himself. In old days, the form of business organization was primitive. One-man businesses and partnerships were the common rule. The risk-taker himself supplied the whole of the capital. As such, their idea that an entrepreneur must also be a capitalist and that net profit includes interest was not wrong for the times they lived in. In these days capital is supplied by certain persons while risk is borne by altogether different persons. Hence this point of view is not correct for our own times. F. A. Walker, an American economist, was the first man to draw distinction between the function of an entrepreneur and that of a capitalist. He showed that an entrepreneur need not supply any capital whatsoever, though he generally supplies a substantial part of it. This view is now accepted by economists in general.

Marshall and his English followers maintain that an entrepreneur also does the work of an organizer and his reward for organization is included in net profit. This opinion should now be regarded as out-of-date. An entrepreneur need not himself do the work of an organiser. In a typical joint stock company, for instance, the function of organization is usually delegated to paid managers. It is quite separate from the function of entrepreneurs. Consequently, it is necessary to keep organization and enterprise as two different factors of production.<sup>4</sup>

### § 5. HOW IS PROFIT DETERMINED

Economists are not agreed as to how profits are determined. Different opinions have been put forward by different economists. We shall give here the most reasonable explanation of the determination of profit. While reading other books, students will come across different analyses of gross profit and different theories of the determination of profit. They should not be upset by the diversity of opinions. In the elementary stage, they might understand one explanation ; and if they are satisfied with it, they should stick to it.

#### Normal Rate of Profit

At the outset, it should be made clear that no entrepreneur will undertake a risk unless he gets a reward for it. In the short period, he may incur a loss; and he may still continue to remain in business in the hope that he might make good profit in near future. But in the long period, he must earn reasonable profit for his risk-taking function and bargaining skill. This reasonable profit which is essential to persuade the entrepreneur to undertake the risk is known as *normal profit* and *enters into the expenses of production*. This is an important point and should always be borne in mind.

#### Determination of Profit

Profit, as we have seen, depends upon the personal qualities of

<sup>4</sup> I very strongly maintain that logical sense makes the separation of organisation and enterprise inevitable and essential. The Marshallian view is too conservative to be applicable to modern conditions.



the entrepreneur. Personal abilities of the various entrepreneurs show considerable divergence. The abler the entrepreneur, the higher the profit, and *vice versa*. There are some very able entrepreneurs who earn magnificent profits. On the other extreme, there are those unfortunate employers whose income is just sufficient to enable them to meet their expenses (including normal profit) and to keep their heads above water. "At this point, where success is scarcely better than failure, profits are at a minimum ; we may, in fact, regard such businessman as the.....marginal class of entrepreneurs, and from this low point upward we measure profits. As the ability, foresight and courage of the entrepreneur increase, so does his reward in the form of profit becomes greater, and at any particular point the amount of profit is proportionate to the superiority of the abilities of the more capable employer over those of the employer at the margin."<sup>5</sup>

*Rent of Ability.* The reader will thus find from the above that profit is determined just like rent. The differential advantage of the super-marginal land over the marginal land determines rent ; similarly the superior abilities of a particular entrepreneur over his marginal compeer determines profit. As such, profit is often described as the *rent of ability*.<sup>6</sup>

#### § 4. CALCULATION OF PROFIT

##### Profit per Annum

Profit is generally calculated as percentage of the capital employed during a year. Suppose, during the year 1954 a businessman who has invested Rs. 1,000 as capital, makes a profit of Rs. 120.

His rate of profit, then, is  $\frac{120}{1,000} = 12 \text{ p.c.}$

##### Profit on Turnover

When the sales of the business come to the level of the capital employed in the business, there is said to be *one* capital turnover. It simply means that the capital is turned over once. If during a year, total sales amount to four times the capital employed, there have been four capital turnovers.

Sometimes profit is expressed as a percentage of the capital turned over during the year; then it is known as *profit on turnover*. In the above example, we assumed that 12 per cent profit is made on the capital of Rs. 1,000. Now, if the capital has been turned over four times during the year (in other words, if the total sale comes to Rs. 4,000 during the year), the rate of profit on turnover is Rs 3 per cent only. Were the capital turnover twice, the rate of profit on turnover would have been 6 per cent.

<sup>5</sup> Thomas, *Elements of Economics*, p. 331.

<sup>6</sup> In this theory, the critic may say, it has not been examined how the rate of normal profit is determined. This is simple. This depends upon the demand for and the supply of enterprise. If demand exceeds supply the normal rate of profit will be high ; and *vice versa*. At any particular time, the rate of profit is the equilibrium point at which the demand for and the supply of enterprise are equal to one another.

If a businessman keeps profit on turnover to a small figure, his prices will be fairly low ; his turnover will increase as a consequence and his profit in total will be fairly large. If he keeps the profit on turnover fairly high, his prices will also be high; his turnover will decrease and his profits may become small. Profits, thus, depend upon the percentage and the turnover; and usually if one is increased, the other decreases. This alternative always presents itself to the businessman who resorts to the course best to his mind.

#### § 5. TENDENCY OF PROFITS TO FALL

As society progresses, profits tend to fall because the rate of increase in the supply of enterprise exceeds that in the demand for it. In this respect, then, it resembles interest which behaves in the same way. It is, of course, unlike rent which rises with the progress of society due to its limited supply.

As knowledge increases and becomes the possession of an increasing number of the members of a society; as inventions spread and an increasing number of employers are enabled to obtain access to new inventions and new processes; and as the number of men of ability of any community becomes more plentiful with increasing advantages for obtaining mental and technical equipment ; so do the opportunities to make exceptional gains tend to become less frequent and profits as a whole tend to touch lower levels. This tendency is somewhat offset by a greater demand for enterprise in the new industries set up for supplying new wants. But the increase in demand does not keep pace with increase in supply and the profits tend to fall.

#### INTERMEDIATE QUESTIONS

1. How are profits determined ? Explain with the help of an example the difference between gross and net profits. (M. B., I. A., 1953).
2. Write a note on Gross and Net Profits. (M. B., I. A., 1952).
3. Explain briefly the term Profit. Distinguish between gross profit and net profit. (Osmania, I. A., 1952).
4. What do you understand by profits ? How far can you justify the payment of profits ? (Patna, I. A., 1947).
5. What do you mean by profits ? Should they be paid ? (Patna, I. Com., 1949).
6. How do profits arise ? Do you think they are justified ? Give reasons for your answer. (Poona, I. A., 1950).
7. "There would be no profit in a static society" Comment. (Poona, I. Com., 1950).
8. Write a note on Gross and Net Profit. (Punjab, Inter., 1949).
9. Analyse Profits, and discuss your analysis. (Raj., I. A., 1951).
10. Account for difference in profits earned by different enterprisers. (Raj., I. Com., 1953)
11. Define Profit. What are the constituent elements of profits ? (Raj., I. Com., 1950).
12. Analyse profit. Who receives it in the case of a joint stock company ? (Travancore, I. A., 1943).



# Public Finance

Book VI

Chapter 53

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## CHAPTER 53

### PUBLIC FINANCE AND TAXATION

Public Finance is concerned with the income and expenditure of public authorities, and with the adjustment of the one to the other.—*Hugh Dalton*.

#### Meaning of Public Finance

In every progressive society, some form of Government organization exists. Government has certain functions and duties to perform. These functions are either *necessary* or *optional*. The defence of the country against foreign aggressor, the maintenance of peace within the country and the enforcement of law for the punishment of evil-doers are *necessary functions*. The *optional functions* of a Government are those functions which a Government is pre-eminently suited to perform by virtue of its position as a central body and a large capitalist. It may provide a good currency and a uniform system of weights and measures, good roads and railways and efficient post and telegraph offices. The more a Government plays the *role* of an educator, the more ~~numerous~~ its optional functions tend to become. All these functions involve expenditure, to meet which Government needs money. Therefore, it has to raise revenue. The science which studies the wealth-getting and wealth-spending activities of the State is known as Public Finance. As Findlay Shirras puts it, Public Finance is the science which is concerned with the manner in which authorities obtain their income and spend it<sup>1</sup>.

#### Divisions Of Public Finance

*Public Expenditure* and *Public Revenue* are the obvious branches of Public Finance. Sometimes the income of the State falls short of its revenue, and the Government has to borrow money. The problem of *Public Debt* is so important that it is studied as a separate branch of Public Finance. Finally, the financial administration, involving the framing of budgets, and the like, has also got to be studied. *Financial Administration* emerges as the fourth branch of Public Finance. Public Revenue, Public Expenditure, Public Debt and Financial Administration are, then, the four divisions of Public Finance.

#### Public Expenditure

Scant attention was paid to Public Expenditure up to 19th

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<sup>1</sup> Findlay Shirras, *The Science of Public Finance*, Vol. I.

century. It was only recently when increase in population, prices, standard of living and frequency and expenses of wars increased public expenditure enormously that it began to be studied as a separate branch of Public Finance.

*Public and Private Expenditure.* The reader will appreciate certain significant differences between public and private expenditure. Firstly, the income of a private individual is usually, more or less, fixed and he has to adjust his expenditure to it. The State, on the other hand, first finds out the probable expenditure of the coming year and then adjusts its income to it. Secondly, a private individual regards a surplus of income over expenditure as a mark of wisdom, for that helps him in the proverbial "rainy day". But, in Public Finance, a surplus is considered to be bad since it shows that people have been taxed unnecessarily and also because a surplus makes State officials wasteful. The ideal to be achieved by a finance minister is a small deficit which makes State officials careful in spending money. Thirdly, public expenditure is of a compulsory character. For instance, expenditure on defence must be incurred and interest on debt must be paid. But in private expenditure, the will of the individual often determines the amounts and directions of its application.

## Public Revenue

Writers on Public Finance have divided Public Revenue in a variety of ways. Without going in detail we may point out the main sources of revenue of the modern State which are as under :

(1) *Public Domain.* Government is the direct owner of certain land, forests and mines; and receives a revenue therefrom.

(2) *Fines and Gifts.* Sometimes the State charges a penalty from the offenders of law. These fines are not levied primarily with the object of deriving a revenue. Nevertheless, they are as good as any other source of income. Sometimes some rich persons voluntarily give some donations to the State for humanitarian objects.

(3) *Rate or Price.* The modern State carries on certain enterprises like post offices, railways, etc. The price paid by the purchasers of the goods or services sold by these enterprises, is a source of income of the State. When you buy a post-card, you pay nine pacs as its price. A rate or price has been defined as a payment made by an individual for a service or commodity sold by the Government.

(4) *Taxes, Fees and Assessments.* The above sources of income do not yield sufficient revenue. The main sources of income of the State are taxes, fees and special assessments.

A tax is "a compulsory contribution to the Government to defray the expenses incurred in the common interest of all, without reference to special benefit conferred". Tax differs from price in the sense that, firstly, tax is compulsory while price is voluntary, and, secondly, the payer of price is directly benefited while the tax-payer may not be benefited directly and proportionately. For instance, if a rich man pays Rs. 5,000 per month as tax, he might get only a little



benefit in return in the shape of security of life and property ; while the rest of the money might be spent by the State on the improvement of the "slums"; but if he purchases ten envelopes, he receives full value for what he pays. As Prof. Taussig puts it, "The essence of tax is the absence of a direct *quid pro quo* between the tax-payer and public authority." We sometimes pay *fee* to the State, *e. g.*, court-fees and stamp fees. Fee has been defined as a payment to defray the cost of each recurring service undertaken by the State primarily in the public interest but conferring a measurably special advantage on the fee-payer.

Sometimes an improvement is effected by the State in the public interest but those who benefit by it are charged in proportion to the benefit conferred. For instance, a road might be improved and the expenses collected in the shape of *special assessments* from those who directly benefit by it. It is American in its origin and application. It has been defined as a compulsory contribution levied in proportion to the special benefit derived, to defray the cost of public improvement to property undertaken in the public interest.

## § 2. CANONS OR PRINCIPLES OF TAXATION

Taxation is considered to be the most important part of the Science of Public Finance. Taxation is one of the sources of income of the Government and its study is thus merely a part of the whole science.

The qualities desirable in a system of taxation have been embodied by Adam Smith in four canons or principles.<sup>2</sup> Subsequent writers have generally followed and adopted them and they have now become classical. They are stated below :

(1) *Principles of Equality or Equity.* "The subjects of every State ought to contribute to the support of Government, as nearly as possible, in proportion to their respective abilities, *i. e.*, in proportion to the revenue which they respectively enjoy under the protection of the State. In the observation or neglect of this maxim consists what is called the equality of taxation".

The principle, known as the (principle of equity), discusses the lines of levying taxes equitably. It is generally agreed upon that contributions collected by the State from its members should be such as to inflict equal sacrifice on each of them. According to Adam Smith, principle of equal sacrifice will be put into practice if taxes are collected in proportion to the incomes of the members of the State. Such taxation is known as Proportional Taxation. Adam Smith finds probably few followers today. Modern economists generally maintain that equality of sacrifice can be brought about if the rich pay more than proportionately to their income and the poor less than proportionately. Such Taxation is known as Progressive Taxation : it is coming widely into popularity.

(2) *Principles of Certainty.* The tax which each individual is bound to pay ought to be certain, and not arbitrary. The time

<sup>2</sup> Adam Smith, *Wealth of Nations*, Book II, Chap. II, Sec. 2.



of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain to contributor and to every other person. This statement is so clearly worded as to require no explanation. Certainty implies absence of speculation in the finance of the State and the discouragement of arbitrary exactions on the part of tax-gatherers<sup>3</sup>.

(3) *Principle of Convenience*. "Every tax ought to be levied at the time or the manner, in which it is most likely to be convenient for the contributor to pay it. A tax upon the rent of land or houses payable at the same time at which such rents are usually paid, is levied at a time when it is most likely to be convenient for the contributor to pay ; or when he is most likely to have wherewithal to pay. The greater the convenience to the tax-payer, the less the time and resources involved in the collection and payment of taxes. Taxes on commodities, called indirect taxes, are very convenient since they are paid by the consumer in a manner that is convenient to him. He pays them little by little as he has occasion to buy goods.

(4) *Principle of Economy*. "Every tax ought to be so contrived as to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the State." This principle means that those taxes should be given preference whose cost of collection is less in proportion to their yield and which cause least injury to the economic interest of the tax-payers. For instance, if the collection of a tax requires the services of an army of collectors whose activities cause the tax-payers to stop business for some time, the cost incurred by the State and the injury inflicted on the tax-payers will be so great as to constitute a flagrant violation of the principle of economy.

*Modern Additions to the Above Principles*. Modern writers have added three more principles to the above four Adam Smithian principles of taxation.

(5) *Principle of Productivity*. This principle requires that a tax should be productive of handsome yield. The imposition of several taxes yielding small proceeds causes great vexation and inconvenience. It is better to impose only tax which can produce large return.

(6) *Principle of Elasticity*. An ideal system of taxation should consist of ~~some~~ taxes whose income might automatically increase with wealth and population, or can be made to increase to meet sudden or exceptional demand for revenue without necessitating considerable increase in the cost of collection. Income-tax is an ideal tax from this point of view.

(7) *Principle of Simplicity*. A system of taxation should be simple, plain and intelligible to the masses.

<sup>3</sup> Adam Smith wrote : "The certainty of what individual ought to pay is, in taxation, a matter of so great importance, that a very considerable degree of inequity, it appears, I believe from the experience of all nations, is not so great an evil, as a very small degree of uncertainty."



## § 3. DIRECT AND INDIRECT TAXES

**Meaning**

Taxes are either direct or indirect. "A direct tax is one which is demanded from the very persons who, it is intended, or desired, should pay it". Income-tax is a direct tax; it is collected from persons earning incomes beyond a certain minimum, and they cannot pass it on to others. Similarly inheritance tax is collected from the inheritor at the time the property is inherited, and he cannot shift it on to anybody else.

Indirect taxes are those which are demanded from one person in the expectation and intention that he shall indemnify himself at the expense of another.<sup>4</sup> For instance, when an importer imports sugar or cigarettes, he is charged import duty. It is not intended that he himself will bear its burden, but that he will recover the amount so paid from consumers by means of an advance in price.

Sometimes a direct tax is passed on to other persons. For instance, a businessman paying income-tax may enhance the prices of goods sold by him with a view to recover the amount paid as tax. But this will not make it an indirect tax. It is the intention of levying the tax which decides whether it is direct or indirect; and in the present case the intention was that the tax-payer should bear its burden.

**The Advantages of Direct Taxes**

The advantages of direct taxes, like income-tax, inheritance tax, land tax, etc., are the following: (1) *They are economical.* A direct tax is paid by the ultimate tax-payers to the State, as such the cost of collection is small. (2) *They are certain.* The tax-payer knows what exactly he has to pay and the State authorities know what they have actually to receive. (3) *They are equitable.* The person on whom the burden finally falls can be generally definitely ascertained and the rate of payment easily proportioned so as to equalise sacrifice. (4) *They are elastic.* Direct taxes can be easily increased to meet the emergent demand on the State purse. Moreover, their proceeds automatically increase as wealth and population increase. The various adjustments and amendments made in the Indian Income-Tax Act to suit the varying needs of the Government illustrate this point fairly well. (5) *They arouse civic consciousness.* When a man pays direct taxes, he feels that he is contributing something towards the maintenance of the State and he naturally tries to understand whether his money is being properly utilised or not.

**The Disadvantages of Direct Taxes**

(1) *They are sometimes very inconvenient.* For instance, an income-tax payer has to keep an elaborate system of accounts to suit the whims of tax-gatherers and to fill up detailed statement, both of which cause considerable inconvenience. Sometimes the time of payment is also unsuitable. (2) *They are tried to be evaded.* An income-tax payer, in order to escape taxation, gives wrong state-

<sup>4</sup>J. S. Mill, *Principles of Political Economy*, Bk. V, Ch. 3, Sec. 3.



ments. Such cases arise almost every day. Direct taxes have, therefore, been called taxes on honesty. (3) The basis of assessment is arbitrary and, therefore, the likelihood of doing injustice to certain sections of community is great.

### **The Advantages of Indirect Taxes**

Indirect taxes possess the following advantages.: (1) *They are very convenient.* They are added to the prices of commodities so that purchasers do not feel that they are paying any tax. Moreover, the tax is paid little by little as purchases are made. Finally, as the consumer is at liberty either to buy or not to buy, as he pleases, it must be his own fault if he ever suffers considerable inconvenience from such taxes. (2) *They can be collected from even the poorer section of community.* It is a principle of statecraft that each member of the State should pay something, however little towards the maintenance of the State. It is generally the indirect taxes which make it possible. (3) *Some of them are elastic.* Taxes levied on articles of necessity are very elastic : since the demand for such articles remains almost the same in spite of an increase in price due to the imposition of an extra tax, the yield increases if the rate of tax is pushed up. But if the elasticity of demand for the articles taxed is great, an increase in tax is accompanied with a fall in the yield. (4) *They cannot be easily evaded.* Because they are included in the price of articles which cannot be had unless the price is paid, their evasion is not possible. (5) Sometimes they are levied on intoxicating liquors and drugs and similar articles and *do a distinct social service* by restricting their consumption.

### **The Disadvantages of Indirect Taxes**

(1) *They are inequitable.* The rich or the poor, whoever purchases the article, has to pay the same price. As such, the poor have to make greater sacrifice than the rich. (2) *They are uneconomical.* Usually some middlemen intervene between the ultimate taxpayer and the state, and they can easily increase the price of the goods taxed beyond what is justified by the rate of the tax. (3) Since the payer of indirect taxes does not feel that he is paying a tax his *civic consciousness is not stimulated* and he is not led to take a keen interest in the matters of the State. (4) *These taxes are uncertain.* The actual extent of consumption and, therefore, the ultimate yield, cannot be definitely anticipated. (5) As shown above, some indirect taxes are *inelastic*.

### **Direct Taxes versus Indirect Taxes**

Sometimes the advantages and disadvantages of direct and indirect taxes are compared in order to find out which is the better of the two. Such attempts are not of much practical value. Each of them has advantages and disadvantages and they cannot be weighed in the balance to draw definite conclusion in favour or against either of them. In any taxation system, both kinds of taxes must be present; they are like the two legs of a man each of which is necessary for walking. In the famous words of Gladstone, they are like two attractive



sisters and it is the duty of every finance minister to pay his respects to both of them.

*The Case of India.* The quest becomes a proper one if it is posed in a slightly different way. We may well ask : Should a particular country impose direct or indirect taxes to increase the State revenue equitably or to make the taxation system just ? The answer will naturally depend upon the conditions prevailing in each country. Let us take the case of India. Our tax system is not well balanced. It relies unduly upon indirect taxes, mainly because they are not felt by the payers. Indirect taxes, as already said, fall more severely on the poor than on the rich. Most of our important sources of income are indirect taxes like excise duties, customs duties, etc. The only important direct tax is income-tax. Consequently, in order to make our system well balanced and ethically just, more direct taxes should be introduced.

### INTERMEDIATE QUESTIONS

1. State and explain Adam Smith's four canons of taxation. What are the modern additions to Adam Smith's list. (Andhra, I. A., 1950).
2. What is progressive taxation ? How can it be justified with reference to the canon of equality ? (Andhra, I. A., 1945).
3. Explain proportional and progressive taxation and discuss the merits and drawbacks of both. (Bombay, I. A., 1940).
4. Why should the rich pay more in taxes than the poor ? How far is this principle followed in practice in India ? (Bombay, I. A., 1939).
5. Explain the canon of ability in taxation. How far has this canon been followed in India ? (M. B., I. A., 1953).
6. How does the State raise its revenue and how does it spend it ? (Mysore, I. A., 1943).
7. Discuss the merits and demerits of direct and indirect taxes (Osmania, I. A., 1952).
8. What is Progressive Taxation ? Give arguments for and against it. (Osmania, I. A., 1951).
9. What are the canons of taxation ? How far can you justify the sales tax in your State ? (Patna, I. A., 1950).
10. How do you distinguish direct taxes from indirect taxes ? Discuss their relative merits. (Patna, I. A., 1947).
11. Discuss, giving examples, the relative merits and demerits of direct and indirect taxes. (Poona, I. A., 1950).
12. What is a tax ? Do you think that the rich should pay more in taxes than poor, and why ? (Poona, I. A., 1949).
13. Discuss the principles of taxation. What are the dangers of ignoring these principles ? (Punjab, Inter., 1951).
14. What are the advantages and disadvantages of direct taxes ? Is Sale Tax a direct tax ? (Punjab, Inter., 1950).
15. What is a tax ? Distinguish it from Fees and Prices, and explain the characteristics of a good tax. (Raj., I. A., 1953).
16. Explain the merits and demerits of Direct and Indirect Taxes, and mention any two Direct Taxes in India. (Raj., I. A., 1952).
17. What are the chief canons of taxation ? In the light of these principles, examine the salt tax and income tax in India. (Travancore, Inter., 1953).
18. Distinguish between Proportional and Progressive Taxation. On what grounds would you justify Progressive Taxation ? (Utkal, I. A., 1952).
19. Distinguish between Direct and Indirect Taxes. Give examples. (Utkal, I. Com., 1952).
20. Define a tax. What are the canons of taxation ? (Utkal, I. Com., 1952).

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